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Journal of the AMERICAN MEDICAL WOMEN'S ASSOCIATION

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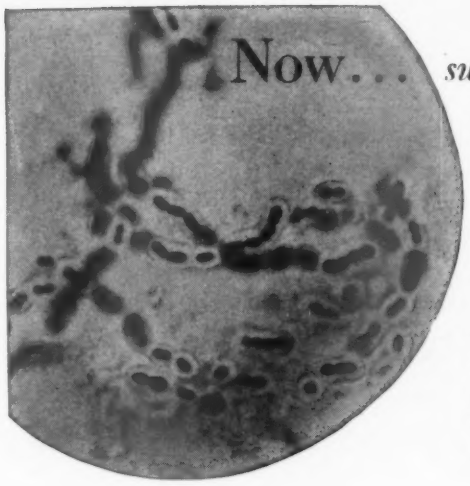

successful active type-specific immunization against pneumococcal pneumonia

"The evidence . . . demonstrates clearly that immunization of man with the specific capsular polysaccharides of pneumococcus types I, II, V, and VII is effective in preventing the development of pneumonia due to these types in the immunized subjects."[1]

1. MacLeod, C. M.; Hodges, R. G.; Heidelberger, M., and Bernhard, W. G.: J. Exp. Med. *82*:445 (Dec. 1) 1945.

Photomicrograph of DIPLOCOCCUS PNEUMONIAE (magnified 1,350 times), after "typing" with homologous antiserum by Neufeld method. The swollen, unstained, sharply outlined capsules contain the type-specific polysaccharide, which is mixed with similar antigens from other types of pneumococci in the preparation of Solution of Pneumococcus Polysaccharides.

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1 *Barnes, J.: Brit. M. J., 1:79, 1944.*

2 *Sevringhaus, E. I. and Sikkema, S. H.: Am. J. Med., 2:251 (Mar.) 1947.*

3 *Finkler, R. S. and Becker, S.: J. A. M. W. A., 1:152, 1946.*

4 *Finkler, R. S. and Becker, S.: A Preliminary Evaluation of Dienestrol in the Menopause, Am. J. Obst. and Gynec., 53:513 (Mar.) 1947.*

5 *Cantarow, A., Rakoff, A. E. et al: Preliminary Studies of Dienestrol (Tentative Title) to be published.*

6 *Gordon, E. S.: Value of Dienestrol in the Menopausal Syndrome (Tentative Title) to be published.*

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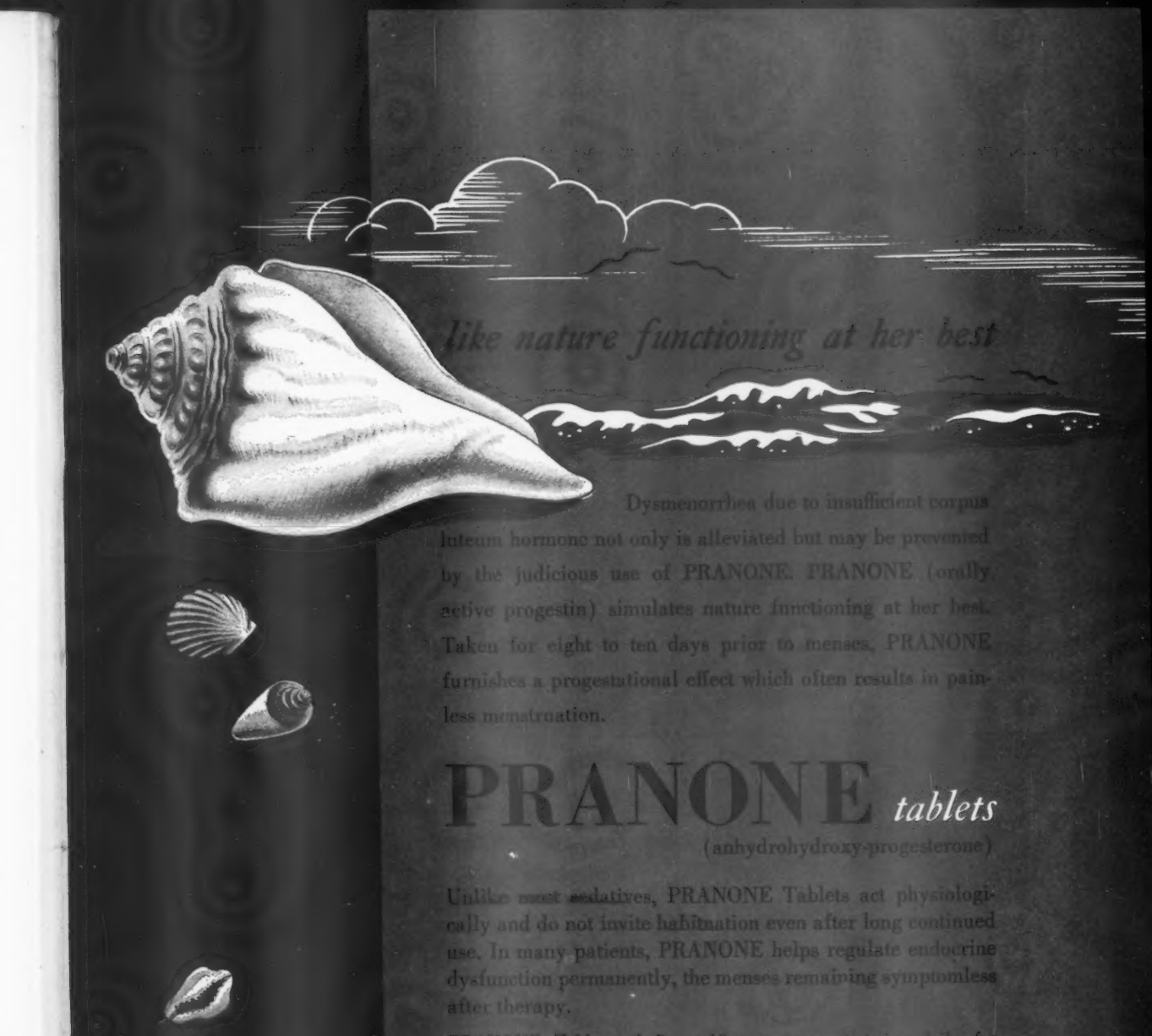

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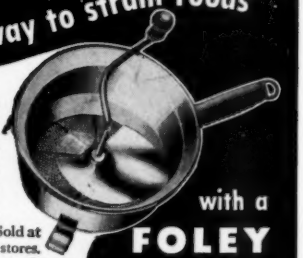

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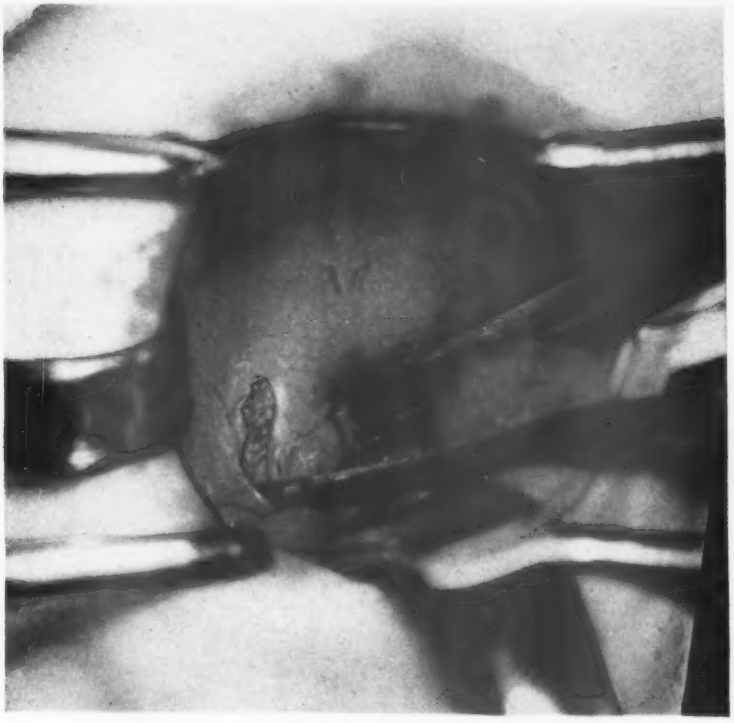

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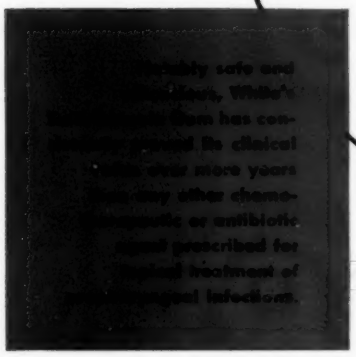

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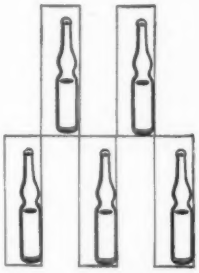

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Group Tension*

HELEN V. McLEAN, M.D.

Chicago Institute for Psychoanalysis, Chicago, Illinois

IN THE LAST PART of the nineteenth century scientists began to interest themselves seriously in the problems of human personality. The concept of man which had been generally accepted assumed that man was almost entirely motivated by the rational, logical aspects of his personality. When Charles Darwin proposed his evolutionary hypothesis, man was dethroned. He no longer represented the center and purpose of biological life, but only an incidental step in a perhaps timeless evolutionary process. Three centuries earlier Galileo had pushed our planet from its central pre-eminent place in the universe. To these two severe traumas to man's self love and egotism was to be added a third blow which further injured man's narcissism. A few biological and psychological scientists, able to divest themselves of the narcissistic bias which lies behind the concept of man as a purely rational human being, began to look at man objectively. Man in his totality became the subject of scientific investigation. The study of man revealed that many irrational emotional forces motivate much of his behavior. The rationality in which he takes so much pride because he feels that it raises him above other forms of animal life is partly genuine, but a greater part is actually rationalization. That is, man in order to maintain his belief in his rationality, resorts to subterfuges so that irrational emotionally motivated behavior, thinking, or feeling will appear as rationally determined.

Over fifty years of investigation have made it apparent that the total dynamic personality of any human being is a socio-psycho-biological complex. The relations between psyche and soma in any individual, the dynamic effect of one individual upon another, which is experienced in any interpersonal relationship, and finally the dynamic effect of the social environment upon the total personality are the three main aspects of the problem. Obviously, the dynamic complexity of interrelationship between such a multitude of forces is almost beyond comprehension. Compared to any physio-chemical problem in which the number of variables is relatively small, any psycho-biological problem presents a staggering number of variables. Even an atomic chain reaction is simple by comparison with any psycho-biological interrelation. If one then adds, as one must because of the reality which exists, the relation of one group to another, we have increased the magnitude of the scientist's task. The dynamic psychiatrists finds that his field of investigation must take into account not only the domain of the psycho-biological sciences, but also that of the social sciences, particularly of sociology and cultural anthropology.

In the past many scientists looked with contempt on the large generalizations and the lack of quantitative preciseness of the dynamic psychiatrist and social scientist. The majority of physicists, chemists, and biologists preferred to ignore human and social problems. Now even the most socially isolated scientist is aware that he can no longer live in an ivory tower, for the atomic bomb did more than inflict widespread destruction. It destroyed the ivory tower of those scientists who naively believed that they could ignore the political and social consequences of their discoveries on themselves personally and on society as a whole. The impact of this rude awakening stimulated many scientists to their initial participation in social action. Now the once depreciated social scientists could laugh, sometimes in a kindly and somtimes in a malicious fashion, at the spectacle of the scientists attempting without much knowledge of social forces to enter the political social arena. That the atomic bomb made scientists conscious of social problems is something which can be recorded on the constructive side of an event which has many counts against it.

Let us remind ourselves of another disillusionment which we have all experienced since Hiroshima. Aghast at the destructive forces which man has loosed on the world, men stopped momentarily at the brink of annihilation to consider how they could turn their creative energies toward constructive goals. The need for constructive effort could not be ignored. But men and nations unable to face and control their own unconscious destructive self-centered impulses began to blame other individuals and nations. Our

*This paper was read on May 13, 1947, at a meeting of Women Physicians in Chicago.

guilt over the magical atomic power which we have acquired is probably a source of intense anxiety. We fear retaliation as does a destructive child. We both enjoy and fear our power. Faced with such conflictful feelings we continue to think and act immaturely and irresponsibly. No real psychological adjustment to our fear has occurred. Flight from or paralysis by fear are the two responses encountered. To relieve the intolerable tension new waves of destructive energy are apt to be loosed. Some of the tension of guilty fear may be relieved internally by increased hostility toward helpless minorities in the United States. Some of it may be projected externally in provocative acts against other nations which are supposedly dangerous rivals.

One of the most explosive problems facing democracy in the United States is that of intergroup tensions. According to the ideals of American democracy all men in these United States should have freedom of opportunity in jobs, education, religion, speech, and the rights and privileges of citizenship. Between these ideals and the actual facts of life for minority groups there exists a wide gap. Amplifying Dr. William Ogburn's term, "cultural lag", one can say there is an economic, social, and psychological lag between our verbal protestations of and our real achievement toward democracy.

To the psychiatrist the problem of racial discrimination is one of social psychopathology. It is a disease of the social organism whose etiological roots lie in personal and group attitudes. From these attitudes have grown the economic and social injustices which distort the lives of both majority and minority groups. It is a disease with infectious qualities. It is endemic in society, but has acute outbreaks under favorable (or shall I say unfavorable) conditions. Latent hostility against a minority group can be stirred up deliberately by a leader so that a virulent epidemic of the disease may be rampant.

In order to attack or discuss this disease, it is necessary to consider the problem from many viewpoints. First, one must consider the psychological motivating forces behind the widespread beliefs of racial superiority held by the majority group. This myth of superiority is the rock to which the majority will cling in the face of overwhelming evidence against it. We shall attempt to show that this myth is a defensive measure against inner insecurity and fears. Although the majority group claims superiority to *all* minority groups, specific accusations are made against each group. In other words, the Jew may be accused of one thing, the Negro of something quite different. A certain minority group may align itself with the majority and join in the accusations against another minority. For example, the Negro may be as vociferous as the white majority in his condemnation of the Jew, or the Jew may be as vociferously anti-Negro. It is apparent that each minority group must be considered separately; first, in regard to the specific accusations leveled against it by others; second, in evaluating the validity of such accusations; third, in determining the source of such feelings. In addition, one must investigate the effect of discriminatory practices on each minority group, and how the tension and difficulties engendered by discriminations are handled by each group.

Then, finally, besides the general attitude in any group there are specific personal racial attitudes arising from the personal experience of an individual. Here racial antagonism will be primarily an expression of personal psychopathology.

I have listed a few of the problems which must be investigated in this disease. Obviously I cannot, because of limitation of both time and knowledge, discuss and answer even one of these questions completely. Because of my specific interest I shall draw on my knowledge concerning prejudicial attitudes toward Negroes and also indicate the reactive effect of such attitudes on the Negro group. In my clinical experiences I have seen many hostile reactions and feelings in white people toward the Negro. Many of these reactions represent symptoms of a psychoneurotic or character disorder. They are an exaggerated form of the symptoms of racial hostility which are prevalent among the so-called healthy people. They differ quantitatively but not qualitatively from the prejudicial attitudes which in either active or latent form are held by most people.

Social and economic problems are the result of man's fumbling efforts to maintain some kind of group life. Once, however, a certain socio-economic structure exists it can exert a favorable or a deleterious effect on the individuals living in such a framework. The existence of a discriminatory social or economic framework can be utilized by an individual or group for purely psychological reasons or for both economic and psychological reasons. Let me illustrate this. A white business man or industrialist may believe in Jim Crow practices in jobs, although it is clear that he is not threatened economically by Negro employees in his factory or business. He may offer many excuses for his attitude, but it is

easy to sense that the real motive behind his attitudes and behavior is emotional in character. This real motive may be unconscious to the particular individual, although an intelligent intuitive type of person may sense the falsity of and the tension behind the rationalizations. What are the real psychological reasons for this employer's prejudicial attitudes? Let us assume that since early childhood he has heard the Negro spoken of only in derogatory terms. If he lives in the North he may have had no actual contact with an individual Negro. All he knows about the Negro has come to him through hearsay. He has been told that he is lazy, dirty, usually unreliable, and sexually immoral. He may believe sincerely that if given an inch, the Negro will seduce and marry his daughter. He has never asked himself whether these hearsay evaluations of the Negro are correct. If he were as psychologically naive and blind in his business life, he would be considered a fool. As a matter of fact, he would not be a business man for long if he behaved so uncritically in that area of his life. One might even excuse him for his past blindness since he might never have had any particular reason for scrutinizing his beliefs about the Negro. But now the Negroes are clamoring for jobs in his factory or business. Why does he still go on with his unverified assumptions? If he should examine his beliefs and find out that they were incorrect, then as a decent man he no longer has any justification for his Jim Crow attitude. But if he begins to take in Negro employees his fellow businessmen may begin to call him names. He has taken a stand which isolates him from his own group and brings down on him the hostility of the group. Instead he quiets his conscience by rationalizing himself out of taking a stand. Thus he is able to remain in his own group. Engrafted on to his original fear of psychological insecurity and isolation from his group there might conceivably be some fear of economic reprisal from his fellow businessmen.

In contrast to the white employer let us consider the poor white farmer in the South or the unskilled laborer in the North. Both lead a precarious economic existence. To them the Negro farmer or laborer is a real economic threat. But does that explain why the poor Southern farmer or Northern laborer is unwilling to grant social equality to a Negro doctor with whom he has no economic competition? Economic factors alone cannot explain the prejudicial attitude. Here again a psychological explanation must be sought. The poor white farmer knows that he is in all important respects no better nor worse than the Negro who lives on the adjacent farm. By comparison with white men high above him intellectually, socially, and economically he has little prestige. Either consciously or unconsciously he blames these superior white individuals for his own unhappy fate. Although he envies and hates them, his rage cannot be directed against them. In impotent fury he seizes on his own resemblance to these powerful figures, that is, his white skin. His epidermis is like a white covering which magically endows him with the much envied prestige. Clothed in it he looks with contempt on the Negro doctor who has achieved culturally all that the poor white farmer wishes for himself. When he calls a Negro doctor "nigger" instead of Dr. Brown, he is revenging himself on all white men who have made him feel inferior.

Man has gradually been forced to relinquish more and more of his self-importance. Many of his narcissistic claims are frustrated in an industrial society. The feelings of prestige which are so important to any individual are given little satisfaction. There is not even a compensatory security of the kind which man had in feudal society. There the position of an individual was constant. He could not often rise to a higher position, but also he would not sink to a lower level. From his feudal overlord he could be sure of a modicum of dependent gratification for his fundamental needs. Industrial urban society destroyed the security of a fixed place and offered the *hope* of increased prestige through competitive achievement. Actually, relatively few individuals in modern competitive society manage to scramble to the top of the heap. After reaching the top there is still a fear that those coming up may push one down again. Those on top, however, feel ashamed to admit such feelings of fear. A minority group is a convenient scapegoat on which to vent these tense feelings. Depending on the social historical background a particular scapegoat will be most widely utilized. In the South it is the Negro; in Boston, the Catholic; in California, the Japanese. The mere existence of an underdog minority group is reassuring to another supposedly stronger minority or the more powerful majority group. As long as one group can look down on another group, the unconscious fears for its own shaky prestige can be somewhat allayed. Lloyd Warner and his co-workers at the University of Chicago have shown the dynamics of the class-caste system operating in both a Southern and in a New England town. The white employer in a New England town no longer has the independent security which his Puritan forebears enjoyed.

He is dependent on and often must report to the New York banker and the absentee directors. His subservience to them will be in conflict with his own traditions of independence and manliness. For him to attack the New York banker and directors is impossible since he is dependent on them. If he can blame all his troubles on the Catholics who have moved into his ancestral home town then he will have an outlet for the tension engendered by this conflict.

The scapegoat mechanism for discharge of tension is a well-recognized phenomenon. In interpersonal relations it has widespread use. Angry with his wife, a man turns on his secretary. Angry with her husband, a woman berates her maid. Usually in interpersonal relationships a relatively healthy person is conscious and ashamed of an over-emotional outburst against an innocent victim. In intergroup relationships the conscious shame for making another group a scapegoat is much less because of the firmly entrenched rationalizations which are current. To look down on another racial group as inferior may be the socially acceptable attitude. A person can vent his spleen without conflict on an entire group, say, the Jews, and in the next breath say; "Of course, some of my best friends are Jews." The majority of people are conditioned early in life to the belief that all Negroes are lazy and impulsive, all Jews greedy and unscrupulous, all Orientals sly and untrustworthy.

What other psychological motives contribute to the promulgation of the manifold stereotypes about other groups? I have stated that men individually and in groups are loathe to admit unpleasant aspects of themselves or of the group. By projection on to another person or racial group it is possible to deny an undesirable impulse in oneself or one's group. When the other group shows physical differences the projection is even more successful. A difference in skin color may be the justification for the projection. It may be claimed that this biological characteristic is responsible for laziness, lack of sexual restraint, and inferior mentality, or that it makes another order of human being who is in degree unlike ourselves or our group. The white man in the majority group sees the Negro ostensibly enjoying all the easy ways of gaining satisfaction which the white man has relinquished. He knows how crippled he often feels in his own instinctual life. He suffers from a multitude of instinctual frustrations for which his intellectual scientific achievements seem a very poor compensation. Like a starving man pressing his face against the window of a restaurant in which people are dining sumptuously, he feels intense envy and rage at those who can satisfy their hunger.

It is not so simple, however, for a man with feelings of inferiority from too great inhibition of his instinctual drives to admit such psychological feelings of importance and frustration. Instead of feeling conscious envy, he turns in vindictive rage on those who represent in his mind the temptation against which he must defend his hard won maturity. He projects on the Negro all the forbidden impulses which he wishes to deny in himself. When the white man accuses the Negro of laziness (which means the infantile desire to get something without working for it) and of all varieties of sexual immorality he is trying to project his own dark nature on to someone else.

Even if it could be proved that laziness and sexual impulsiveness are prominent in the Negro, can we as scientists claim that these are inherent constitutional characteristics? Or are laziness and sexual impulsiveness conditional responsives to environmental influences?

In order for any individual to mature, that is, to be willing to assume responsibility in work and in personal relations, he must feel that there is some hope of attaining some of the satisfactions of maturity. A child, whose every self-assertive, independent step is frustrated by his parents will eventually lose his zest for emotional maturation. He may become a passive subservient individual or if his masculine pride has not been completely squelched, he may be an impulse-ridden person. Although physically he is adult, emotionally he remains dependent on others. Sexually he can enter only into casual irresponsible relationships with women (either in or out of marriage). In other words, he is sexually and emotionally still a dependent child. If this can happen to an individual, why not to an entire racial group? The Negro finds himself blocked in almost all the rewards and satisfactions which should be a part of mature behavior. In the South a passive subservient facade, an Uncle Tom attitude toward white men, must be maintained. The slightest slip in this subservient attitude may mean lynching for a Negro and widespread property destruction for his family and friends. He lives in constant fear with little to compensate him for his tension and with almost no hope of amelioration. White society gives him little share in any of the mature gratifications of creative work, education, and citizenship. It would not be remarkable if, deprived of all mature gratifications, he lost zest for responsible action. The rebellion against such a fate with its renunciation of all mature desires leads some individuals to escape to the North.

Here uncertainty haunts every moment of life. The punishment for crossing the color line may not be lynching, but still there is subtle punishment and humiliation, if the Negro infringes too far on the white man's domain. Very few white men will grant him the privilege of equal competition with them. Should a Negro by dint of exceptional ability and emotional drive achieve real competence in a particular field, he discovers that the recognition which comes to a white man as his right is not granted to him. Very few individuals are so ideally mature that they do not long for and expect recognition by their fellow men for work well done. Prestige may not be the chief goal for which the individual is striving but it is a necessary secondary gain which accrues to the sucessful man. If anyone has been an intelligent student he can display a Phi Beta Kappa key; if he has been well trained in a professional specialty and has shown himself to be a man of integrity he knows that he can gain admission into a scientific society of his peers. Being a part of such a group gives intellectual stimulation and from close association a man gains emotional support which helps him to adhere to high standards of scientific, business, or professional performance.

Speaking some time ago before the Council on Foreign Relations, Mrs. Eleanor Roosevelt said, when discussing the displaced people in Europe (I am quoting the sense of her remark), "A person without hope does not remain unchanged. A process of deterioration is bound to occur." She was not talking of people with pigmented skins or slanted eyes. Among the displaced people in Europe are many individuals of high intelligence and culture who once were leaders in civilized communities. Yet such individuals will also deteriorate if there is no hope. The deterioration which comes to the group without hope or with at best uncertain hope is not without its effect on the group which draws the racial line. Emotional maturation, implying as it does the renunciation, sublimation, and control of impulsive expressions of less mature responses in human and social relationships and demanding also tenderness, consideration, enlightened self-interest, imposes considerable psychic strain on all individuals. From such demands for responsible attitudes everyone would like to escape and actually does escape from time to time. Social drinking, occasional lapses into casual sexual relations, temper tantrums, and the vacation much needed by all men in modern life are a few ways by which we can retreat temporarily from too rigid mature behavior. No human being ever completely divests himself of his wish to behave on the impulse of the moment without having to consider long term goals. Freud aptly called this the "pleasure principle" in contradistinction to the "reality principle" which in the normal process of maturation supersedes the pleasure principle. What happens now in any society when several groups are barred from social maturation? Such groups with psychological immaturity seem to live by the pleasure principle (i.e., to be lazy, express sadistic and sexual impulses without thought of their consequences.) This immaturity exerts a constant regressive pull on more mature groups. The longing to return to more infantile and less integrated ways of feeling and behavior is, as I have already said, present to some degree in all persons and all groups. The last ten years have given us ample evidence that a nation which has achieved greatly in many fields can regress to appalling barbarism. Some years ago Abraham Lincoln quoted the familar Biblical saying, "If a house be divided against itself that house cannot stand." One group cannot be securely mature if other social entities in the same nation are immature.

The psychological structure of a group is not the sum total of the personalities in the group. One of the most important differences is between the conscience of the individual and the group conscience. Individuals with weak or corrupt consciences can, by being a part of a strong group, act with integrity. On the other hand, an individual can as part of a group do that which would be forbidden if he acted alone. What happens in an army is clear proof of this. The song in "Call Me Mister" states what happens to the "jerk". Under the pressure of army demands, the poor jerk can behave with fortitude, but losing this support, he comes back to civilian life "still a jerk". In civilian life it is a crime to kill another man even when the provocation is great. But in the interests of national life, killing one's enemies is demanded of individuals whose own consciences would abhor such an act. Not only can an individual temporarily or permanently abrogate his conscience for the social conscience, but the conscience of society is in a state of change. That which was once socially acceptable may become forbidden, or vice versa. It is not too many years ago that mentally disturbed people were punished like criminals. The social conscience of a group can be changed so that no matter what a few individuals in that group *feel* regarding a minority group it will be impossible for such discriminatory *feelings* to be expressed in prejudicial acts.

The psychological problem of intergroup relations is one which has only lately begun to concern psychiatrists and social scientists. An appalling amount of investigation remains to be done before many questions can be answered. Already there are in existence over 180 social organizations which are working in the field of racial education and propaganda. Many of these societies are run by people with good intentions—but good intentions combined with propagandistic zeal may be dangerous. Not only must there be a sincere empathetic feeling towards minority groups but in addition there must be clear headed thinking. Some of these 180 societies are doing both clear thinking and honest feeling in their educational work. The most intelligent of them take full cognizance of the irrational emotional factors in racial tension which, if not dealt with, can bring to naught the most complete plans for economic and social amelioration of the problem.

Lest you conclude that I am advising no social action until we know all the psychological roots for racial tension, I must state clearly that is not my position. Certain courses of action are obvious. Economic opportunities in jobs, good housing, and educational opportunities compatible with an individual's capacities must be obtained for those minority groups who are shut out from such fundamental aspects of our democratic way of life. But even if such changes could be forced on the majority of citizens in the United States, racial antagonism and prejudices would still be present. A thorough-going education in the socio-psychological dynamics of personal and group life must be the basis of any program.

Man should know by now that he must manage his arrogant destructive drives or else. In the face of anxiety and insecurity he must by association with other men be stronger than his fears. The brave man is not the man without fear. Rather the brave man knows he is afraid of many things in himself and external reality. It is unrecognized fear within ourselves which "doth make cowards of us."

In summary: I hope that my few and perhaps confusing remarks have given you some appreciation of the immense complexity of the social disease whose symptoms are revealed in intergroup relationships. Irrational psychological factors play a primary etiological role in bringing about the kind of society where such racial discrimination can be practiced. Men, in order to defend themselves against their inner insecurities, to give themselves an outlet for their own feelings of inadequacy, to protect themselves against humiliating infantile or frightening forbidden hostile and sexual impulses, project and express such conflictful feelings on people belonging to other racial groups. The deterioration which may result in the groups so treated will in turn have a deleterious reactive effect on the group which is the originator of these prejudicial acts and feelings. This social disease can and must be understood and treated if our social organism is to become healthy. The racial problem is not only as Myrdal expressed it "An American Dilemma"; it is a World Dilemma.

E. M. I. C. PLAN

The Department of Health of the City of New York, through Dr. Helen Wallace, Chief, Maternity and Newborn Division, announces the following changes in the status of the Emergency Maternity and Infant Care program (E. M. I. C.).

The Children's Bureau of the Federal Security Agency, Washington, D. C., announced that the activities of the Emergency Maternity and Infant Care Program (EMIC) is undergoing liquidation. Even though this process of liquidation began on July 1, 1947, services will continue to be provided for EMIC patients as follows:

1. The completion of all maternity and infant care for wives or infants for whom initial care was approved before June 30, 1947, at the usual established fees and rates.
2. Maternity care may be approved after June 30, 1947, if the woman was eligible under the program as of June 30, 1947, even though she may apply for care after June 30, 1947.
3. Infant care may be approved after June 30, 1947, if the mother or infant was eligible for care or received care under the program as of June 30, 1947.

Any woman is eligible for complete maternity care if she became pregnant while her husband was in one of the four lowest pay grades of the Armed Forces and if pregnancy occurred prior to July 1, 1947. Any infant is eligible for sick and well baby care during the first year of life, if the father was in one of the four lowest pay grades of the Armed Forces at any time during the mother's pregnancy or during the baby's first year of life, if this was prior to July 1, 1947

Physical Medicine in Everyday Practice

MADGE C. L. McGUINNESS, M.D.

PHYSICAL MEDICINE is the basis of all medicine. It has been used since the dawn of life by man to keep himself well, to build health and strength. Physical medicine is preventive medicine for it concerns itself with ecology, weather, climate, housing, nutrition, clothing, exercise, heat, rest, relaxation, recreation, work, and physical fitness.

The Sun giving light and heat and the moving air tempering these effects are necessary for healthful living. Games, sports, swimming, and all outdoor exercise make for physical fitness, without which no nation survives. Children, particularly, must have their quota of healthful outdoor play, for growing, for strength, for straight backs, for good posture. Good posture must be continuously stressed. Less than 10 per cent of our school children have good body mechanics despite all the programs on physical education of which we hear. Good posture must be taught to children and assiduously cultivated from their earliest days to prevent future illness, fatigue, and tension.

Children can be spared soft teeth, soft bones, rachitis, if their mothers, while pregnant, have adequate exercise in the fresh air and sunshine to build into their muscles and bones the proper nutritive elements. With a proper diet the mother saves her own calcium and phosphorus and is more frequently able to nurse her child. She often volunteers the information that she feels well and strong.

When sunbathing is not possible from October to mid April, artificial light and ultraviolet may be substituted. This treatment will be hailed by women who cannot take cod liver oil or other oils. Several courses of treatment of ten sessions each will be a boon to these. A brisk walk in the open air, proper sleep and rest, complete relaxation several times daily, recreation of her own choosing, all will make for healthier and happier children, less juvenile delinquency, and better citizens.

Eventually walking two miles at least is the goal. Begin with ten blocks daily and gradually work up to it. Follow this by general exposure to the luminous light or infrared radiation for ten minutes, anteriorly and posteriorly, then the ultraviolet, beginning with one minute, increasing by one minute up to ten minutes, thrice weekly, for ten treatments. This constitutes a course. Give a rest of one or two weeks, and then a second course. Avoid too great heat and too much ultraviolet. Self treatment, like self medication, leads to trouble. Protect the head and eyes always, from all light, natural or artificial, as conjunctivitis and eventually cataract may be the result, or, if tuberculosis be latent, there may be a flare up. Vascular disease likewise contraindicates too great exposure. Inspect all parts before and after treatment.

The child of asthenic constitution may be built up by having in addition to sunshine, tonic baths, medical massage, properly graded exercise, suitable games. Proper climate is essential for such children. The vagaries of weather are bad for them, too great sweeps of storm, sudden changes, chilling winds, electrical disturbances, aggravate their condition. Acute infections are the specialty of the temperate zones, as are metabolic disturbances. Arthritis and rheumatoid conditions also are more prevalent than in subtropic climes or in the Southwest where only climate reigns. Gentle heat and massage will help these.

Adults, especially the old, also fare badly in wintry weather and should try to find a more equable climate, less irritating to their cardiovascular, diabetic, glandular disturbances. In southern climes, not exposed to sudden changes, diabetes is milder; cardiovascular tension is lowered; cancer is usually on the skin; thyroid and adrenal glands are not easily stirred up. In our cities, the blanket of soot, fog, and dirt, that makes a ceiling to raise the temperature at least 10 degrees above that of the surburbs, also fills our lungs with poisonous particles to no good end. Therefore the trip out of town, the day in the country or at the beach, the boat ride, occasionally, help greatly.

A word of warning is needed concerning too

great exposure to strong sunshine, natural or artificial. Sensitive skins suffer especially. Fatigue, irritability, nervousness, insomnia, and depression may ensue. Those exposed too frequently to the sun, as aviators, sailors, farmers, police, often develop skin cancer. Those with a tendency to tuberculosis or vascular disturbance may have a flare-up. Protect the eyes and the head, the brain is easily injured.

A physical examination is needed, especially for adults, before indulging in strenuous exercise. Too vigorous sports, as running, jumping, swimming, golf, tennis, ball playing, in the untrained, may damage heart and circulation. Exercise is an individual problem and requires an individual prescription. Sudden collapse or death on the golf course means too much tension has been put into play. Learning to play *early* in life will prevent catastrophe later.

Physical medicine as defined by the American Medical Association through the Council on Physical Medicine, includes physical therapy, occupational therapy, and rehabilitation. These are the measures bringing back to civilian life the injured veteran. They are the same measures that have been restoring the injured workmen before and since World War I, for the victims of industry outnumber the casualties of war a thousandfold. For example, 17,000 had amputations in the war, 120,000 on the industrial front.

By the new law in 1943, Vocational Rehabilitation includes when possible, *complete physical restoration* of the injured and his training for employment.

Physical measures are tools in the hands of the skilled physician just as are the other measures for patients' ailments. A proper diagnosis is essential to treatment. When this is begun early convalescence will be materially shortened. The skilled physician is ever watchful to prevent burns and avoid overtreatment. He is careful to impress this upon the well trained physical therapist who works always under medical supervision. The inadequately trained technician has one idea, to please the patient. "Plenty of heat, plenty of short wave, plenty of galvanic, plenty of *good* massage and exercise", are the rule, to the injury of the patient. This is why the specialist in physical medicine, the physiatrist, is needed to direct, to supervise, to check on treatment and to change it, if and when necessary. The physician sees always the patient's reaction, his progress or lack of it, and acts accordingly.

The surgeon uses physical therapy to help wounds and ulcers that do not heal, to relieve the pain of inflammation in injured muscles, bones, and joints, as in fractures, dislocations, and bruises, and to shorten the course of infections, as in erysipelas, abscesses, boils, and carbuncles on the face, since there are thousands of deaths reported yearly from picked pimples which often cause these latter lesions. By means of physical therapy these conditions are localized, their severity lessened, and their course decidedly shortened.

Physical therapy begun *immediately* a fracture or dislocation takes places means the injured person is returned to work more quickly. Injury to the soft parts often causes more trouble than that to the bone and delays rapid recovery. Those especially trained for this work can help to ease the pain and reduce swelling of the injured soft parts; this prevents hardening of the tissues with stiffness, loss of motion, and a long convalescence. No treatment or treatment too long delayed often means loss of ability to work and probably loss of one's job.

The gynecologist has been using physical measures in the form of douches, sitz baths, enemata, and irrigations, to allay and clear pelvic inflammations, closed tubes, dysmenorrhea, amenorrhea, and special infections. With the advent of long wave diathermy, a great step forward was taken in the ability to localize and directly attack the lesion, in urethra, rectum, cervix, uterus and adnexa. Short wave diathermy with the induction coil on the abdomen is the safer procedure in the hands of those not able to give plenty of time and attention. Either should be given at least three times weekly for from 30 to 90 minute sessions. Too great heat will cause pain, spasm, and perhaps burns. Too little means too many treatments. Neisserian infection succumbs most easily to local long wave diathermy as first induced by Cumberbatch in St. Bartholomew's Hospital, London, in 1913. It is still of service in cases where penicillin has not cleared up the focus. In connection with general hyperthermy (fever) it is almost certainly a means of clearing the condition, with or without penicillin or the sulfa drugs. We now counsel these latter first, to reduce the number of cases treated, leaving those *resistant* to be treated by physical measures.

Genito-urinary lesions in the male are treated likewise and, in both sexes, syphilis, resistant to penicillin and sulfa, gives a higher percentage of clearance when fever is used as an adjuvant to these measures. It helps the more ready absorption of the drugs as well as increasing bodily resistance to the infection.

Besides diathermy, two other methods of pelvic treatment have been devised: the Elliott Treat-

ment Regulator, which uses water heated to 130°F. in a closed circulating system, and the Newman Thermoflo, which depends on heated air instead of water. Both have vaginal or rectal electrodes to raise the temperature. There have been burns with the Elliott machine where too great heat has been applied and defective rubber has broken, permitting the water to drench the parts. As in diathermy or hydrotherapy, no greater degree of heating takes place than 106°F. in the vagina, 104°F. in the rectum, nor 107°F. in the urethra in local treatment. The circulating blood carries off the excess heat and soon equalizes the temperature.

Pelvic treatment may be used pre- or post-operative. In the former case it may open closed tubes, prevent or modify operation; in the latter it may clear up the results of operation, help constipation and backache, and give the patient a sense of well-being.

The galvanic current is of service in certain types of amenorrhea, menorrhagia, metrorrhagia, leukorrhea, stenosis of the urethra and rectum, and in lax muscles of pelvic organs and perineum. The physician must be cognisant of the dangers in such treatment; he only is to give them.

Exercise will be helpful in dysmenorrhea as, (1) Keep the knee-chest position for five to ten minutes, twice daily. (2) Lie on the back, knees up, hands on lower abdomen; by deep breathing see how high and how low the abdomen can be raised. Relax. (3) Contract the gluteal muscles. Inhale deeply; exhale, pulling up the abdomen sharply. Relax. Repeat this five to ten times. (4) Walk on all fours. Done conscientiously, daily, there will be a gradual and finally maximum improvement in several months.

The obstetric patient will be made more comfortable if gentle infrared or luminous light radiation be used postpartum on the perineum twice daily for twenty minutes. Gentle light reduces swelling, allays irritation, and gives a feeling of comfort. It is especially useful for hemorrhoids and helps to prevent breakdown of the perineum or, where present, helps healing.

Properly given massage has a distinct place in the treatment of the obstetric patient. The gentlest of stroking from five to ten minutes, will relieve tension in breast and calf. In severe backache, firmer stroking will be of service. Exercises should be given all through the pregnancy in addition to walking, so as to keep up the tone of muscles. Labor will be shortened, involution hastened, and the patient will be better and sooner able to assume her duties. Exercise postpartum, as in postoperative cases, in the *normal* woman, may begin the day of delivery to prevent thrombophlebitis, phlebothrombosis, or embolism. Every hour on the hour, ten deep, slow breaths should be taken, the toes, ankles, and knees should be gently flexed, extended, adducted, abducted, and circumducted, three times at least. The arms may be moved to the side and over the head, twice or thrice. These exercises may be increased daily, if no fatigue be present and no adverse circumstances interdict them. Being *active,* that is, done by the patient herself, they are of great service. She will be able to turn on the side, the back, move freely in bed, and will be ready to dangle her legs and sit up in a matter of days. Gently pulling up and in the bladder, rectum, abdomen, and stomach, and raising the chest, then tensing the gluteal muscles and gently letting go, strengthens the perineal floor, the sphincters, and the abdominal muscles. Proper posture, lying down, all members in proper alignment, is most essential at all times. Complete relaxation is the secret of well-being. It must be done conscientiously, thrice daily, until it becomes a habit.

In the *asthenic,* one must proceed more carefully, make haste slowly, fatigue is the greatest barrier to quick recovery. Hers is not the case to be dismissed in five or six or even in ten to fourteen days, to return to household cares with added burdens. She is unequal to facing, physically or mentally, her former duties without help from physician and nurse. Hence the necessity for upbuilding, prepartum and preoperative, so there may be less trouble later. *Passive exercises* may have to be done by the nurse at first and, when *active* are instituted, they must be fewer in number and less in effort, and frequent rests will be required.

The pediatrician will give tonic doses of ultraviolet in cases of rachitis, now found still operative at fourteen years, for cervical adenitis, and as a general alterative to improve acute infections and chronic conditions. The anemic girl will need, in addition to the above, graduated exercises, postural, general, and corrective.

In acute, severe bursitis, myositis, "neuritis", or fibromyositis, agonizing pain is best treated with rest in bed and cold compresses until pain subsides. The *gentlest* of heat may later be tried, long wave diathermy and static brush being the treatment of choice. Histamine or mecholyl may be of service in subacute or chronic states, but in a region already surcharged with the products of inflammation there will be a further increase of the congestion from the histamine already present and the patient will be in a worse state than before. Massage is not to be given except on

special order and then only by the physician himself. These cases are best treated by the physiatrist in person.

Myogeloses yield to heat and deep massage.

In cases of paralysis, gentle heat, the galvanic current, massage, and exercise will keep up the tone of the muscles while the nerve is recovering. For best results treatment should begin as soon as the lesion is recognized, whether from nerve injuries in war, facial paralysis, hemiplegia caused by a "stroke", or postoperative or postpartum brachial paralysis. In infantile paralysis the Kenny treatment of hot forments, passive and active movements, and proper posture are first given. As soon as possible, active exercises in the Hubbard tub with massage from hot swirling water, at 104° to 106°F., give the patient confidence to move his own arms and legs and so hasten recovery.

Occupational therapy is used in conjunction with physical therapy further to hasten return to health from injury or illness. It helps to train muscles and brain, prevents mental and physical breakdown, teaches new skills, and prepares for work therapy and rehabilitation.

Occupational therapy has been defined by Licht as "medically prescribed activity for therapeutic objectives, which are kinetic, metric, tonic, and psychiatric, and are gained by the use of activities and tools." A prescription for occupational therapy states the diagnosis, the result desired as to exercise for injured or weakened muscles, to stretch contractures, to increase joint motions, to improve circulation, or to change the mental attitude in psychiatric cases. Fatigue, spasm of muscle, and inflammation of a joint should be guarded against.

Work therapy, as originated and put into practice by the American Rehabilitation Committee, Inc., is "work activity administered for its remedial and vocational value. It is prescribed and controlled by a diagnosis of the patient's physical and vocational needs and possibilities. It aims, by the restoration of physical function and mental stability to fit the patient for employment in a selected type of occupation. The tools of the work to which the patient has been accustomed or must become accustomed, to perform the work of the selected occupation, are used as the basis of exercise. All work exercises are based upon previously analysed aptitudes and qualifications. All curative effort is directed toward fitting the patient, physically and mentally, for the occupation". This is work therapy, the end result of complete understanding of the patient and his needs.

Rehabilitation has come to mean in the popular mind an elaborate system of training, as formal exercises, marching, and occupational therapy, as popularized in the Army-Air Force Convalescent Rehabilitation Program, conducted by Dr. Howard A. Rusk in the recent war and later adopted by the military and veteran services. "Rehabilitation, the Third Phase of Medical Care", is being stressed at present by Dr. Rusk as "the bed-to-job program" at the Bellevue-New York University Unit. To the civilian physician, rehabilitation begins with the first aid offered to the sick or injured person.

Rehabilitation is getting the patient back to a normal way of living by every available means; he is taught to take care of himself, to overcome his handicap, to become once again a useful member of society. When he has mastered his body and mind, he is tested as to his work ability and, if necessary, work therapy is instituted in preparation for a job suited to his capabilities, *not* his handicap.

The U. S. Public Health Service paints a gloomy picture of our present health status. Chronic diseases make *23 millions* of victims, of whom *one million* die yearly, and a *billion* work days are lost. Many of these cases could be helped by physical medicine in office, clinic, and home. Eight million persons are considered psychiatric. Here, too, physical medicine, as an adjuvant to other treatment, could be put to work as a means of reconditioning.

There must be many of these handicapped who could seek aid under the Vocational Rehabilitation Act of 1943, if physicians could reach them, which means an immense store of patient material still untapped, that could be salvaged to lower the staggering costs of custodial care and the almost unbearable burden of taxes. The Federal Government urges every State, through its Vocational Rehabilitation Service, to take advantage of this aid.

In civilian life most of our troubles come from too great tension which besets us almost in the cradle, is greatest in childhood and adolescence, and dogs our footsteps to the grave. Until we learn the three R's of Rest, Relaxation, and Recreation in their proper relation to work we cannot change the pattern of our present way of living and suffering. The laity is reading a number of books on the subject of Relaxation. The physician might inform himself on the topic to prevent future irritability, mental instability, chronic disease.

The Baruch Committee on Physical Medicine was founded to make available to physicians,

hospitals, the armed forces, government and medical schools, the value of physical medicine in rehabilitation form, and the prevention of physical and mental diseases and injury. One of its aims is to increase the number of physicians specializing in the subject, to teach, to direct activities, to man hospital departments. Women are peculiarly fitted for the practice of physical medicine, as witness the great number of successful women technicians.

Other physicians must realize that this specialty requires in addition to a broad classical and medical education, a firm foundation of physics, physiology, and pathology, and a sympathetic understanding of people and their mental and spiritual attitudes, that comes with long years of clinical experience with sick or well persons and their families in their home, work, and social environment.

In the hospital, since physical medicine is solely a reference department, *dependent upon every other* department, its chief aim is to shorten convalescence, empty the beds, and return a patient quickly to his job.

In the office and home, this specialty has a wide sphere of usefulness in the hands of the physician who has the time, the patience and the willingness to use its modalities to allay pain, give comfort, and train patients to seek health rather than to cure disease.

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Dr. Birch is Associate Professor of Internal Medicine, University of Illinois, Chicago

Tropical Medicine

Part XIII—The Helminthes (Continued)

CARROLL LaFLEUR BIRCH, M.D.

Trichinosis

Trichinella spiralis is the causative agent of trichinosis. This parasite can be considered as belonging partly to the intestinal round worms and partly to the tissue-invading group.

In 1828 London and Peacock first recovered the encysted larvae of T. spiralis from the muscles at post mortem examination. The life cycle was worked out in 1860. In 1897 Brown demonstrated the accompanying eosinophilia.

Adult T. spiralis are tiny, slender worms. The female is 3 to 4 mm. long, the male 1.5 mm. The anterior end is attenuated and shows characteristic cellular bodies. In the female the vulva is in the anterior fifth of the body. After fertilization the male dies and the female burrows into the intestinal mucosa and discharges living larvae during the next six weeks. Each female produces about 1200 larvae, which penetrate into venules or lymphatics and are carried through the right heart to the lung. These larvae are tiny, 100 by 6 micra, and have little difficulty passing through the capillaries of the lung, back to the left heart, and into the systemic circulation. Larvae circulate in the blood for some time, growing all the while. When a disproportion exists between the diameter of the parasites and the caliber of the capillaries the larvae are screened out. Those which reach striated muscle with sarcolemma live; the others die. The destruction of many larvae produces a foreign protein reaction. In striated muscle the larvae encyst but continue to grow for 2 to 4 weeks until they reach one mm. in length. As the space is limited the worms coil on themselves. Host reaction produces most of the capsule with infiltration of neutrophils, lymphocytes, and eosinophils. The cysts become elongated because of the muscle fibers. In about six months calcification of the cysts occurs but they remain viable for 20 to 30 years. When infected muscle is eaten the cyst walls are digested and the larvae freed to become adults in the small intestine, thus completing the cycle.

Two hosts are needed to complete the cycle but both may be of the same species. Hogs may be fed infected pork scraps maintaining the hog to hog cycle. The rat may eat infected pork and the hog eat the rat completing the hog to rat cycle. Cycles may be maintained by dogs and rats or by cats and rats. Man is infected by eating raw or rare infected pork. The reservoirs of infection are the hog, garbage containing scraps of infected pork, the rat, and to lesser extent the cat and dog.

In man the distribution of larvae follows a peculiar pattern. The more active the muscle the greater the number of cysts. The diaphragm, intercostal, ocular, and laryngeal muscles are heavily infected as well as the tongue, deltoid, psoas, and gastrocnemius muscles. Larvae which go to the heart do not encyst, but if present in large numbers produce myocarditis.

Symptoms are closely related to the cycle in the body. They can be divided into three phases:

1. The phase of intestinal invasion begins within a few hours (6 to 24) after the ingestion of infected pork. It is accompanied by nausea, vomiting, diarrhea, and abdominal pain. During this time worms may be found in the stool.

2. The phase of muscular penetration begins in about 10 days. Often it is ushered in with bilateral edema of the eyelids, high fever, rash, and rheumatic pains. Such neurotoxic symptoms as meningitis or encephalitis may occur. Myocarditis is a serious sign. Fever of 104° or 105° may last for two weeks. A leukocytosis of 20 to 40,000, with 40 to 90 per cent eosinophils is characteristic. Many varied symptoms appear as different muscle groups are involved, painful respiration, strabismus, painful speech, etc. Splinter hemorrhages under the finger nails are common. The average mortality is 5 per cent, but in certain epidemics it reaches 50 per cent. In heavy infections the prognosis is grave.

3. The phase of tissue repair is characterized by encystation of larvae. Convalescence is slow.

The diagnosis is made on the history of eating rare pork, the symptoms, bilateral edema of the eyelids, eosinophilia, etc. Usually there are several cases in the same family or community. Early during the diarrheal stage worms are present in the stool. During the phase of migration larvae may be found in the blood. From the

fourth week on muscle biopsy reveals the encysted larva. The muscle tissue is pressed between glass slides or sectioned, or the muscle digested away leaving the larvae.

The skin test becomes positive in three to four weeks. Antigen is prepared from powdered larvae. In a dilution of 1 to 5000 it gives an immediate reaction. If the skin test is repeated several times it becomes unreliable. It remains positive for life. The precipitation test becomes positive in the fourth to fifth week and so remains for two years.

Treatment is unsatisfactory. Immune serum will reduce the toxicity in the early stages. No drug kills the adult female in the jejunum; none kills the circulating larvae, and none kills the encysted larvae.

Prevention is the most important measure. The United States does not inspect pork for T. spiralis. Refrigeration at -15° C. for 20 days kills the larvae. Pork labeled "Government Inspected" has been refrigerated. About 60 per cent of all pork in the United States is so treated. Smoking and salting do not kill the larvae. Frying sausage does not kill larvae.

Surveys of material examined from autopsies show about 15 per cent of all the people in the United States infected. A careful study made in Boston gave 27.6 per cent.

Important steps in prevention are:

1. Cook all pork thoroughly. In countries where dogs, cats, and rats are eaten these too must be well cooked.
2. Some religions ban pork as a food.
3. Microscopic inspection of pork. This is very expensive, but was effective when used in Germany.
4. Refrigeration, as described.
5. Prevent hogs from eating pork scraps. Get rid of rats.

Trichinosis is not a tropical disease, in fact it is rare in the tropics. It is the temperate zone which harbors most of the infections with T. spiralis, and it occurs more frequently in the winter than in the summer because more pork is eaten in cold weather.

Trichinosis is a real public health problem in the United States.

Part XIV—Nemathelminthes

Filaria

The tissue-inhabiting nematodes include the filaria. The word filaria means "thread-like." Infection with filarial worms constitutes one of the most interesting groups of diseases clinically and biologically.

These worms are delicate, thread-like parasites which tapor anteriorly and posteriorly. The females are longer than the males. The caudal end of the male is coiled like a watch spring. Man is the definitive host, for the adults are found in various places in the human body. These infections usually are transmitted by blood sucking flies. They are accompanied by a high grade eosinophilia.

Filarial worms, on the whole, have complicated life cycles. A simplified and generalized life cycle includes these stages: Adult males and females reside and mate in the human host. Females discharge their young in a pre-larval stage called microfilaria. The microfilaria migrate to subcutaneous tissue and are ingested by a blood sucking fly. From the mid-gut of the fly the microfiaria penetrate the gut wall and make their way to the thoracic muscles, where they become larvae. The larvae migrate into the proboscis. When the fly takes its next blood meal the larvae drop to the skin near the puncture wound and penetrate into the lymphatics, and course to their site of choice in the human body. Here they become adult worms thus completing the cycle which takes about one year.

The microfilaria really are embryos, the uncoiled embryos from the eggs. Some microfilaria retain the egg shell and are called "sheathed"; others discard the shell and are "unsheathed". The microfilaria from different species of worms have certain morphologic characteristics such as size, the presence or absence of a sheath, the lengths of the cell free spaces at the anterior and posterior ends of the worm as well as the location of the nerve ring, the excretory pore, the excretory cell, the "G" cells, and the anal pore. The specialized "G" cells probably form part of the gastro-intestinal tract of the adult worm. Some microfilaria are nocturnal, appearing in the peripheral blood only at night; others are diurnal; and still others non-periodic. Some microfilaria do not circulate in the blood but remain in the subcutaneous tissue.

The common filarial infections of man are:

1. Wuchereria bancrofti, the cause of filariasis or elephantiasis.
2. Wuchereria malayi similar to W. bancrofti.
3. Onchocerca volvulus, the blinding filaria, the cause of onchocerciasis.
4. Loa loa, the cause of loiasis.
5. Dracunculus medinensis, the cause of dracontiasis.

Filariasis

Sometimes this condition is incorrectly called elephantiasis. Actually elephantiasis is a complication of filariasis. The elephantiasis known in ancient times was not a disease entity but included leprosy, madura foot, and lymphatic obstruction from all causes, as well as true filarial elephantiasis. It was not until 1863 that Demarquay working in Paris first saw the microfilaria. Facts concerning this disease have accumulated from all parts of the world. Wucherer working in Brazil in 1866 saw microfilaria in chylous urine. In Calcutta Lewis first observed microfilaria in the blood in 1872. Adult worms first were found by Bancroft in Australia. Manson's investigations in South China demonstrated the role of the culex mosquito and the periodicity of the microfilaria.

Filariasis is caused by a filarial worm Wuchereria bancrofti. It is named for Dr. Wucherer and Dr. Bancroft who did much of the original work on this disease.

The geographical distribution is wide, most of the tropical and many of the sub-tropical climates of the world, including the West Indies, northern South America, Africa, India, China, Japan, Northern Australia, many of the islands of the Pacific. About Charleston, South Carolina, there was an endemic area which survived since the days of slave trading. There is little or none of it in this area to-day.

The intermediate host in W. bancrofti infection is the mosquito. Culex fatigans, the common house mosquito is the usual vector but thirty-nine other species are known to transmit, including Culex pipiens, certain species of Aedes, Anopheles, and Mansonia mosquitoes.

Briefly, the life cycle begins with a human being with adult worms in the lymphatics and microfilaria in the blood. The microfilaria are sheathed and usually nocturnal and the vector is a night biter. In Polynesia the microfilaria show no periodicity. In taking a blood meal the mosquito ingests microfilaria which migrate to the proboscis after they become larvae. In about ten days the mosquito is infective. When it takes its next blood meal larvae are deposited on the skin. They probably enter the body through the puncture wound, but they can penetrate actively and seek the lymphatics, usually of the groin. Here they mature, mate, and produce microfilaria which circulate in the blood at night, thus completing the life cycle. In some cases the microfilaria are few and concentration techniques are needed to demonstrate them. In other patients the blood is teeming with microfilaria, 200 to 600 per cu. mm. of blood. A drop of fresh blood on a slide may show the worms writhing and twisting and scattering the blood cells in all directions.

Symptoms appear about four months after infection. Lesions of the scrotum are early and include funiculitis, epididymitis, orchitis, and perhaps hydrocele and edema. Extremities too may be involved, with red streaks marking the course of the lymphatics associated with swelling. Lymph node enlargement is common, especially those of the groin and the epitrochlea region. Lymphangitis which often follows adenitis begins with general malaise, chill, nausea, vomiting, pain in the involved part, and fever of 102° to 105°. The temperature remains high for a week or more and falls rapidly. Regional lymph nodes become tender. The extremities usually are involved. Pain spreads to the arm or leg, accompanied by redness and swelling. Occasionally a lymph node breaks down and discharges a milky fluid. The inflammatory reaction lasts about one week but has a tendency to recur. Some workers believe these acute attacks are caused by secondary infections, such as the streptococcus; others believe they are caused directly by the filaria. During acute attacks microfilaria are not found in the peripheral blood.

Filaria may cause synovitis in any joint. Involvement of retroperitoneal lymph nodes causes abdominal pain and chylous peritonitis. If the lymphatics of the bladder are included in the process chyluria and perhaps hematuria result.

Adult worms cause local host response with well marked cellular reaction to wall off the poisonous products. The end result is death of the worm with encapsulation and calcification. This blocks the lymph channels. If the lymphatic collateral circulation is not sufficient to carry off the lymph it accumulates in the distal part, usually a leg, an arm, or the scrotum, penis, or mammary gland. Fibrosis and calcification cause permanent obstruction of the lymphatics and lasting enlargement of the involved part, called elephantiasis. The degree of elephantiasis varies from slight to gross deformity. All are familiar with the pictures of natives with one leg as large as the body or a scrotum which rests on the ground. Many years are required for the development of true elephantiasis. Usually it is associated with repeated infections over a period of years. The percentage of infected persons who develop elephantiasis is low, from 1 to 5 per cent or even less. In case of scrotal involvement fear of impotence caused great mental anguish in the armed forces. These fears

have proven ungrounded in the vast majority of these patients.

Specific diagnosis is made by demonstrating the microfilaria in the blood, urine, hydrocele fluid, or ruptured lymph nodes. Blood smears, of course, are made with regard to the periodicity of that particular region. Both thick and thin smears are made just as in malaria.

There is no specific treatment. In acute attacks of lymphangitis bed rest with elevation of the affected part is indicated. Anthiomalin, lithium antimony thiomalate, is recommended in the early stage of lymphangitis. Removal of lymph nodes is contraindicated for the trauma and scarring lead to obstruction. Fluctuating nodes are incised and drained. If secondary infection is present penicillin or sulfa drugs are indicated. Infected persons should be removed from endemic areas.

Among the armed forces stationed in the South Pacific, especially on the island of Samoa, there were many cases of filariasis. Because infections were not repeated over a long period of time and proper treatment was instituted, few cases of sterility or elephantiasis are expected.

After elephantiasis of one leg has occurred, tight bandaging of the entire leg beginning at the toes is the best treatment. The bandage is removed only to apply another, a tighter one. Surgical interference in such a leg rarely is helpful for the swelling returns as soon as the individual is about again. When the genitalia are involved with massive enlargement, radical surgery meets with moderate success.

The best treatment, of course, is prevention which is as simple as it is difficult to achieve. Avoid the bite of the mosquito. This is a public health problem and is accomplished in the same way as the prevention of malaria.

Wuchereria malayi is similar to W. bancrofti. The microfilaria can be distinguished from those of W. bancrofti by the presence of two isolated cells near the tip of the tapering tail. The mircofilaria are sheathed and nocturnal. Various species of Mansonioides mosquitoes serve as vectors.

W. malayi is found in Malaya and surrounding countries.

The symptoms are similar to those produced by W. bancrofti, except that the lower extremity is involved more often and elephantiasis is apt to be limited to the leg below the knee.

Onchocerciasis

Onchocerca volvulus is the causative agent. The adult female measures 300 to 500 mm., and the male 20 to 35 mm.

Geographically this condition is found in certain parts of tropical Africa and in a restricted area of Mexico and Guatemala, on the Pacific slopes of the mountain range from 2000 to 5000 feet elevation. This includes the regions of Guerrero, Oaxaca, and Chiapas. Probably it was carried to the Western Hemisphere from Africa by the slave traders.

Onchocerciasis is seen chiefly among the native population especially those who work in or live near the coffee plantations, for the parasite is carried by the coffee fly.

The adults of O. volvulus are immured, tightly coiled in subcutaneous tissue. The tumors are seen as rounded prominences on the exposed part of the skin, varying in size from a pin head to a hen's egg. The presence of the worms produces severe tissue reaction with the laying down of a fibrous tissue capsule about the worms. In this wen-like tumor the adult worms mate and the females give rise to unsheathed microfilaria which migrate for short distances in the lymphatics of the subcutaneous tissue. These microfilaria are not found in the blood. If the tumor is near the eye the microfilaria may migrate into the eye tissue and cause blindness.

In Africa the natives wear few clothes and the tumors are found all over the body. In Mexico the tumors are located on the head, neck, and arms, the exposed parts.

When the vector, the coffee fly, black fly, buffalo gnat, or as it is scientifically named Simulium damnosum, bites near a tumor the microfilaria are taken into the mid-gut with the tissue juice. The parasite undergoes certain essential changes within the fly. Then when the fly bites its next victim the larvae are injected. The larvae remain at the site of injection, grow to adults, and produce young thus completing the cycle.

The treatment is the surgical removal of the tumor-like masses. This does two things; removes a reservoir of infection as a public health measure, and may prevent blindness of the patient.

The diagnosis is made by microscopic section of an excised tumor or by demonstrating the microfilaria in the tissue juice obtained by multiple skin puncture near the tumor.

The simulium or black fly is tiny, 2 to 3 mm., but it is a strong fast flier and a vicious blood sucker. It is a day feeder. It breeds in fast flowing streams. The eggs are cemented to rocks and debris, and the larvae live in the stream.

Onchocerciasis is of special interest to Americans for the Pan American Highway passes through the coffee plantation area. The Mexican and Guatemalan Governments are making every effort to eradicate this disease.

(*To be continued*)

RECENT ADVANCES IN THERAPY

Recent Advances in the Treatment of Heart Disease

DOROTHY W. ATKINSON, M.D.* and ELLEN BROWN, M.D.**

From the Division of Medicine, University of California Medical School

DURING RECENT years the therapy of certain aspects of heart disease has been modified by the advent of new drugs and antibiotics and by rapid progress in the field of cardiovascular surgery. Some important developments in this field will be reviewed briefly.

SUBACUTE BACTERIAL ENDOCARDITIS

In the brief period during which penicillin has been available in sufficient quantity to permit its use in the treatment of subacute bacterial endocarditis, a dramatic change has occurred in the prognosis of this previously almost uniformly fatal disease. As yet, time has not permitted the conclusion of any long-term studies, but the results of treatment in a number of clinics where varying schedules of treatment have been employed indicate that the disease may be cured or arrested in between 50 and 80 per cent of cases[1,2]. The outlook for the future is even more optimistic because improvements in therapy are being made continuously.

Successful results depend on the sensitivity of the infecting organism and administration of adequate amounts of penicillin by either intramuscular or intravenous routes for protracted periods of time. Concomitant administration of anticoagulants has been abandoned for the most part because (a) proof of any favorable influence from them is lacking and (b) subjecting the patient to the added danger of hemorrhage seems unjustified[1].

The daily dosage of penicillin must be based on study of the infecting organism and the adequacy of blood levels obtained during treatment of each case. Hunter[1] suggests that at least 500,000 units a day be used when the organism is sensitive to 0.1 units of penicillin per cc. of culture medium. If the organism is more resistant to penicillin, amounts sufficient to obtain blood levels at least four or five times the amount necessary for *in vitro* inhibition of growth are recommended. In cases where the organism has been unusually refractory, success has been reported following use of massive doses of penicillin (as much as 20,000,000 units daily) or use of various forms of combined antibacterial therapy[1]. Treatment must be individualized in every case, regardless of the results of *in vitro* tests of sensitivity.

It is generally agreed that intensive therapy must be continued without intermission for at least six to eight weeks in most cases although two to three weeks of treatment may be sufficient. Sterilization of the blood stream alone does not assure that the progress of the valvular lesion has been arrested; continued positive blood cultures are unequivocal evidence of inadequate dosage and show the necessity for changing the therapeutic program. Fever, elevation of the sedimentation rate, and embolization may persist for several weeks after a successful course of therapy with eradication of all infection[1].

Relapse is most likely to occur if treatment is not both prolonged and intensive. Even after long courses of therapy, most relapses occur within thirty days of cessation of treatment; thus, it is possible to determine whether or not treatment has been successful fairly promptly after cessation of an initial course of treatment. Although it has not been shown clearly that an inadequate course of therapy is prejudicial to the success of a second course, failure to make a vigorous at-

*Assistant Clinical Professor of Medicine, University of California Medical School, and Chief, Department of Adult Medicine, Childrens Hospital.
**Assistant Professor of Medicine, University of California Medical School.

tack on the disease as early as possible may allow fatal embolic accidents to occur and valvular lesions to progress.

Rheumatic Fever

During the recent war, circumstances required prolonged observation of large numbers of cases of acute rheumatic fever under unusually well controlled conditions. Among other fruitful results of these experiences is the report of Warren et al., concerning salicylate therapy[3]. Pertinent literature is quoted in this paper. A series of 186 cases of acute rheumatic fever was studied, the patients being divided into three groups, viz., (1) eighty-eight patients who received small oral doses (2 to 7 grams a day) of acetyl salicylic acid or sodium salicylate, (2) fifty patients who received 10 to 16 grams of sodium salicylate per day by mouth, and (3) forty-eight patients who were given 10 grams of sodium salicylate in 1000 cc. of normal saline intravenously every twenty-four hours for seven days. Sodium bicarbonate was given when necessary to reduce gastric irritation and prevent toxic reactions.

It was found that the larger oral doses reduced the temperature more quickly than the smaller doses and seemed to be more effective in cases of acute pericarditis. On the other hand the larger were no more effective than the smaller oral doses in preventing development of cardiac damage or progression of preexisting heart disease, in shortening the total period of rheumatic activity, or in preventing development of polycyclic attacks of rheumatic fever. While these results suggest that large doses of salicylates are advantageous early in the disease, the prophylactic effects of intensive therapy can only be evaluated after observations have been continued for periods of many years.

The importance of early recognition of the premonitory signs of toxicity during administration of large amounts of salicylate, either orally or intravenously, has been emphasized. Serious toxic reactions were always preceded by hyperpnea and treatment was then directed toward restoration of normal acid-base balance.

The demonstration that adequate plasma levels (35 to 45 milligrams per 100 cc.) could be obtained by oral administration of 10 to 16 grams of sodium salicylate daily, and the fact that no advantages of intravenous over oral route of administration could be found are important contributions because the dangers of intravenous administration of a drug capable of disturbing electrolyte balance so profoundly are obvious, especially for children and patients with serious cardiac disease.

Diseases of the Coronary Arteries

a. Anticoagulant therapy. Wright[4] has reported experiences with dicumarol in a series of 76 cases of acute coronary thrombosis. The first 43 of these patients were selected because (1) they had suffered from repeated episodes of multiple thrombi in different areas of the coronary tree or the original thrombus had propagated; (2) they had suffered repeated embolic phenomena either to the lungs or to other areas; and (3) there were evidences that both factors were active. Comparison of the outcome of these cases with a somewhat similar series reported elsewhere[5] suggests that proper use of anticoagulants may be of great benefit in certain cases of progressive or multiple coronary thrombosis. It is not recommended at present that this form of therapy be used in every case of coronary occlusion[4], but further studies are in progress to determine its field of usefulness.

When anticoagulants are to be used, the choice between dicumarol and heparin depends on (a) available laboratory facilities, (b) economic considerations, and (c) the speed with which action is required. The relatively expensive heparin may be used alone or in combination with dicumarol during the first twenty-four to forty-eight hours of treatment in urgent cases because of its rapid and transient effects. Dicumarol has the advantages, however, of prolonged action, low cost, and effectiveness when administered orally. Its administration must be guided by frequent and accurate determinations of prothrombin level, and its use is contraindicated in the presence of hepatic disease. Any form of anticoagulant therapy is dangerous when potential sources of hemorrhage, such as surgical wounds, or renal or gastro-intestinal lesions are present. If the slightest signs of bleeding appear during dicumarol therapy, the drug should be stopped no matter what the laboratory results indicate. For hemorrhagic complications, transfusions of whole fresh blood, which may be citrated, and intravenous administration of vitamin K (menadione bisulfate, 64 mg.) are usually effective.

A schedule of treatment, based on daily prothrombin times determined by the Quick technique is outlined by Wright[4]. However, it is to be remembered that the laboratory methods for determining the concentration of prothrombin in the blood have not been standardized fully and it is necessary to be familiar with the techniques

and results of a given laboratory before accepting such determinations as a basis for treatment. If doubt exists and the use of anticoagulants is urgent, heparin should be used, its dosage being governed by determinations of coagulation time.

b. Shock resulting from coronary occlusion. In a case report[6] attention has been called to the importance of administering adequate volumes of blood or plasma on the rare occasions when severe shock complicates coronary occlusion. The presence of shock may be recognized by the usual signs of extreme peripheral vascular collapse, including one very important manifestation: Collapsed superficial veins and normal or low venous pressure. Under such circumstances, prompt administration of blood or blood substitutes may be essential to supply adequate venous return to the heart; this must be done before shock has progressed to the "irreversible" stage. The danger of precipitating congestive failure by this measure is obvious and fluids should not be injected when venous distention or pulmonary congestion are present.

c. Thiouracil in the treatment of angina pectoris. With the advent of drugs capable of reducing the basal metabolic rate, it was almost inevitable that they would be explored as a means of decreasing the physiologic demands on the heart, even though it is already the concensus of opinion, based on extensive experience, that total thyroidectomy is rarely of benefit in heart disease[7].

An enthusiastic report[8] describes improvement in 8 out of 10 patients with angina pectoris during thiouracil therapy. The doses employed ranged from 0.4 to 1.2 grams per day at the outset to 0.1 grams daily for protracted periods. Leucocyte counts were made weekly. Relief of symptoms was said to be correlated with the drop in metabolic rate, and in certain patients who were improving, substitution of placebos resulted in prompt return of pain.

Di Palma and McGovern[9] were less favorably impressed by their experiences with thiouracil. They also observed decreased precordial pain with falling metabolic rate in certain cases. However, in 4 out of the 8 cases studied, the drug had to be discontinued after periods of three weeks to two months because of toxic eruptions, exertional or nocturnal dyspnea, or failure to lower the metabolic rate by the doses of drug employed. Of the 4 patients whose exercise tolerance improved under therapy, only one remained improved at the end of a year. It was felt by these authors that, in general, the adverse effects of depressed metabolism and drug administration (fluid retention; intermittent claudication) outweighed any beneficial effects.

These reports must be accepted with caution because of the small number of patients studied and because it is well known that the results of any form of treatment directed toward relief of angina pectoris are difficult to evaluate. The serious toxic effects which occasionally result from administration of thiouracil must also be considered. If further trials of antithyroid drugs are undertaken, propylthiouracil should be used because of its relative safety.

d. Surgical treatment of coronary insufficiency. Extensive experimental studies have been carried out by Fauteux[10] to develop an operative procedure which would eradicate three important functional disturbances resulting from coronary insufficiency, viz., (a) sensory disturbances, (b) vasomotor reactions, and (c) mechanical circulatory disorders. Various surgical approaches to the problem in the past have attacked only one or another of these factors separately. To promote development of collateral channels, Fauteux ligates the great coronary vein, and to attack factors (a) and (b) he performs a pericoronary neurectomy, severing sensory, sympathetic, and vagal fibers. The combined maneuver has been found to decrease conspicuously the mortality from experimental coronary ligation in dogs. In the past six years, either the combined operation, or ligation of the coronary sinus without neurectomy, has been performed on 16 patients[11]. All had a well established diagnosis of coronary insufficiency and intractable angina, and several had had previous episodes of myocardial infarction. Three deaths occurred during or just after operation and 2 patients have died since operation. Of the 11 patients who have survived, all are working and are markedly or moderately improved. Further study is needed before the relative benefit and safety of this procedure will become clear.

Cardiac Failure

a. Digitalis preparations. The large number of purified derivatives of digitalis which has now become available has led to some confusion concerning their proper use. Indications for use of any of these preparations are the same, viz., (1) congestive heart failure, (2) auricular fibrillation or flutter with rapid ventricular rate when quinidine is not used alone, (3) prevention or treatment of attacks of paroxysmal auricular tachycardia, and (4) as a therapeutic test in cases of questionable or incipient cardiac failure from any cause. Several useful reviews concerning digitalis derivatives have appeared recently[12,13,14].

Digitalis folia (powered whole leaf of *Digitalis purpurea*) has the important advantages of economy and familiarity but its dosage must be based on bioassay. The crystalline preparations are more uniform, may be prescribed in terms of weight, and are suitable for intravenous injection. Some of them are considerably more expensive than digitalis folia.

Digilanid (Sandoz) is a mixture of the three crystalized glycosides of *Digitalis lanata* in their naturally occurring proportions and its properties resemble those of digitalis folia.

Lantoside C (Cedilanid-Sandoz) is a potent glycoside obtained from *Digitalis lanata* having all the usual actions of digitalis preparations. Its relatively rapid action when injected intravenously has made it popular in the treatment of cardiac emergencies, including auricular tachycardia, auricular flutter, and auricular fibrillation. Its relatively rapid excretion may be a factor of safety in reducing the duration of toxic manifestations. It has not been proved that its action differs qualitatively from that of other digitalis glycosides. For oral administration it has no advantage over digitalis folia or the other purified preparations and the range of dosage necessary for maintenance is relatively wide. Ray and La Due[13] have described satisfactory results with intravenous Cedilanid in treating patients who developed congestive failure while taking daily doses (probably inadequate) of digitalis preparations. It is important to emphasize, however, that extreme caution must be used in administering intravenously any potent preparation of digitalis when patients have recently taken medications having digitalis-like actions.

Digoxin (Burroughs Wellcome) is a purified glycoside obtained from lanatoside C. Like Cedilanid, it is rapidly absorbed and excreted. It is undesirable for intravenous use because it is supplied in alcoholic solution requiring dilution before injection. Difficulties have been described in maintaining full effects by oral administration over long periods of time[12].

Digitoxin (Digitaline Nativelle-Fougera; Purodigin-Wyeth; Crystodigin-Lilly; Digitoxin-Squibb and Stearn, etc.) is a crystalline derivative of *Digitalis purpurea*. It is especially well suited for oral digitalization and maintenance because it appears to be completely absorbed from the gastro-intestinal tract and produces almost no gastric irritation. Because of its relatively slow excretion, cumulative effects may lead to toxicity. Patients can be fully digitalized by giving a single dose of about 1.25 mg. either orally or intravenously. Doses required for digitalization and maintenance, in milligrams, are approximately equivalent to corresponding doses of digitalis folia in grams. Digitoxin is less rapidly effective after intravenous injection than lanatoside C or Strophanthin. Gold[13] believes that digitoxin is the preparation of choice for oral administration but it is not entirely agreed that it possesses any advantages over powdered leaf[14].

Strophanthin preparations have not been widely employed in this country. They are the most rapidly acting cardiac glycosides when injected intravenously but are not suitable for oral use because of irregular and poor absorption. For immediate digitalization, it is recommended that 0.3 to 0.5 mg. of K-strophanthin or ouabain be given at once, followed by 0.1 mg. every half hour to hour until full digitalization is accomplished.

Approximate doses of the more commonly used crystalline preparations of digitalis are as follows:

	Digitalization		Maintenance
	Oral	Intravenous	Oral, per day
	mg.	mg.	mg.
Digilanid	3.0-8.0	3.0	0.3
Cedilanid	4.0-7.0*	1.2-1.6**	0.5-3.0
Digoxin	2.0-5.0		0.2-1.2
Digitoxin	1.2*	1.2	0.1-0.2

*In 24 hours.
**Followed by 0.4 mg. every four to eight hours until a full digitalis effect is obtained.

b. Sodium restriction. The practical importance of vigorous sodium restriction as an adjunct to treatment of edema due to heart failure has been re-emphasized by White and his associates[16,17]. It was found that when sodium intake was kept below about 625 mg. (1.5 gm. sodium chloride) daily, remarkable improvement occurred in certain cases of congestive failure in which digitalis and mercurial diuretics were ineffective or not entirely satisfactory. Fluid intake need not be limited when the sodium intake is minimal; in fact, fluid intake should be normal or high (2 to 3 liters daily) because the concentrating power of the kidneys is often reduced in cardiac failure and a large volume of urine is needed to excrete metabolic products. It has not been demonstrated clearly that forcing fluids to between 3 and 6 liters daily, as advocated by Schemm[18], induces any additional diuresis except on rare occasions.

Enforcement of strict sodium limitation is difficult except in hospitals providing expert dietary service and requires vigorous co-operation on the part of the patient. In order to keep salt intake below 1.5 gm. daily, certain dietary items such as milk must be curtailed or omitted and the use of salt-free bread and butter are necessary. Ammonium chloride is used to flavor the food;

many commercial "salt substitutes" are condemned because they contain sodium even though free of chloride.

c. Positive pressure breathing in pulmonary edema. Positive pressure oxygen therapy has not been employed as an aid in the treatment of pulmonary edema to the extent which its apparent merits would seem to justify[19]. The mechanisms by which edema of the lungs is produced in cardiac failure are probably multiple[20] but Barach[21,22] has demonstrated in experimental animals and in a small series of patients that the exertion of a slight positive pressure (about 7 cm. water) during both inspiration and expiration has the following important physiologic effects: (1) Increased pressure against the inner surface of the lung tends to oppose the filtration of fluid from the pulmonary capillaries. Supporting evidence has been supplied by the experiments of Drinker[19]. (2) The entrance of blood into the lungs may be retarded slightly, the excess blood being pooled in the right heart and venous reservoirs. It follows that therapy of this type is contraindicated when venous return to the heart is small as in shock or peripheral circulatory failure.

The apparatus required for breathing oxygen under pressure need not be complicated. The type described by Barach[23], which is available commercially, supplies the necessary features, viz., (1) a non-leaking mask, (2) a rotating disc with apertures of various sizes permitting adjustment of the pressure opposing expiration within the range of 0 to 4 cm. water, (3) a device by which the proportions of oxygen and air are regulated and the inspired air is humidified, and (4) a rebreathing bag of thin rubber which allows additional humidification, and when distended exerts a small positive pressure during inspiration.

Cardiac Arrhythmias

a. Auricular Flutter. Tandowsky et al.[24] have reported a series of cases of auricular flutter treated with lanatoside C (Cedilanid) and quinidine. Patients who had recently received digitalis were excluded from the study. Full intravenous doses (1.6 mg.) of lanatoside C were given initially, followed by daily oral doses of 0.1 mg. When auricular flutter was replaced by auricular fibrillation, quinidine was given in doses based on individual tolerance (0.72 to 1.44 gm. per 24 hours) while lanatoside C was continued. Out of 21 patients selected without respect to complicating disease, auricular flutter was unaffected in only one—a patient with thyrotoxicosis. It was felt that lanatoside C had an advantage over digitalis folia because of its rapid action and strong vagal effect, and that maintenance doses of lantoside C were of value as prophylactic treatment following restoration of sinus rhythm.

b. Determination of quinidine concentration in plasma. Use has been made of a new and practical method of determining plasma concentration of quinidine[25]. As has been suspected from clinical experience, there was marked individual variation in maximum plasma concentration of quinidine following a single large oral dose. In two patients, plasma quinidine concentrations of 1.0 mg. per liter were coincident with absence of attacks of paroxysmal nodal tachycardia and a relationship between plasma concentration and frequency of attacks was demonstrated.

Surgical Treatment of Hypertension

Reports concerning the results of partial sympathectomy for relief of hypertension can not be compared directly because of differences in (a) evaluation of the status of patients before and after operation, (b) selection of patients for surgical treatment, and (c) operative techniques employed.

Peet [26,27] has been able to follow 437 patients for periods of five to eleven years after performing bilateral supradiaphragmatic splanchnicectomy. Of those patients who had had no preoperative evidence of cardiac, cerebral, or renal involvement, 95 per cent were living, and of those in the malignant stage (with papilledema), 19 per cent were living at the end of the period of observation. Of those who died, 43 per cent were in the malignant phase at the time of operation. Symptoms were relieved permanently in 86 per cent of living patients, but this was not necessarily dependent on lowering of blood pressure or improvement in cardiac or rental function. Systolic and diastolic blood pressure was lowered in 81 per cent, unchanged in 13 per cent, and increased in 6 per cent of cases. Almost one out of 5 of the 112 patients in the malignant stage who were treated surgically survived five to twelve years; the life expectancy for this group was appreciably greater than for a similar series treated medically at the same clinic.

To produce a more complete denervation of the visceral vascular bed, Smithwick advocates a two-stage transdiaphragmatic lumbodorsal sympathectomy. In a recent review[28], he states that the operative risk for this procedure is not over one per cent, and it offers a 75 to 85 per cent chance for improvement in the majority of selected cases of continued hypertension. A series of 156 patients subjected to this procedure has been followed for periods of one to five years[29,30]. The re-

lation between pulse pressure and diastolic blood pressure was used as a basis for evaluation of the rigidity of the vascular tree. Best results were obtained when pulse pressure was relatively small. No clear relationship between the reversibility of hypertension and the microscopic appearance of the kidney could be found in studies of biopsy material from 125 cases. Following operation, diastolic blood pressure was lowered 20 mm. Hg. or over in 61.5 per cent and more than 10 mm. Hg. in 79.4 per cent of all cases. Renal function was improved after operation in the majority of patients. Improvement in eyegrounds, electrocardiogram, and renal status was most striking in those cases where the preoperative findings were most abnormal[21]; these signs of improvement occurred frequently even when blood pressure was unaffected by the operation. Each of 11 patients having unilateral or bilateral pyelonephritis with hypertension showed some lowering of diastolic blood pressure after splanchnicectomy.

De Takats et al.[22] have discussed a series of 109 patients treated by transdiaphragmatic splanchnicectomy. In contrast to the practice in other clinics[26,29], patients with signs of advanced arteriosclerosis and those with recurrent retinal hemorrhages or papilledema were considered unsuitable for operation. Surgery was advocated as a prophylactic measure in young individuals in whom lability of blood pressure is demonstrated and the diastolic pressure is only modestly elevated. In 60 per cent of cases selected by these criteria for surgical treatment, no anatomic changes in the renal blood vessels were found in biopsy specimens obtained at the time of operation.

Few comprehensive reports have been made by the medical observers working in association with surgeons in this field. Palmer[23], however, has discussed some of the disadvantages of surgical treatment and given some broad recommendations concerning selection of patients for operation. The period of partial or total disability resulting from the operation was estimated at one year.

There is general agreement that the best results of sympathectomy occur in young individuals, that good responses follow operation more often in women than in men (especially favorable results are reported for cases in which toxemias of pregnancy have preceded the appearance of established hypertension), and that surgery should not be undertaken in the presence of renal failure, untreated cardiac failure, or diffuse cerebral degeneration.

Final evaluation of the results of sympathectomy will depend on critical long-term studies in which the outcome of patients receiving surgical treatment is compared with that of patients treated by medical measures. All patients should be followed by the same group of observers and similar tests of functional status employed.

Surgical Treatment of Congenital Defects of the Heart and Great Vessels

a. Anomalies of the aortic arch, exclusive of coarctation. Gross and Ware[24] have summarized the important anomalies of the aortic arch. Operative procedures for relief of esophageal or tracheal compression in cases of double aortic arch or anomalous subclavian artery are outlined. Surgical treatment is feasible but not often required in cases of right aortic arch. These anomalies may be recognized with some accuracy by roentgenologic methods.

b. Coarctation of the aorta. A recent study of 104 cases in which an important degree of coarctation of the aorta was proven at autopsy has reemphasized the brevity of the average span of life in the presence of this anomaly[25]. In general agreement with Abbott's earlier studies, the average age at death in this series was thirty-five years; 61 per cent of these patients died before or during the fortieth year of life. Only 26 per cent died of causes which were considered incidental.

In 1944, Blalock and Park[30] described the successful by-passing of an artificial obstruction to the aorta in the dog, accomplished by means of an anastomosis between the proximal end of the divided left subclavian artery to the side of the distal segment of the divided and sutured aorta. In experimental studies on dogs, Gross and Hufnagel[27] found that it was possible to make satisfactory end-to-end anastomoses of the aorta after resecting segments as long as 2.5 centimeters. Crafoord and Nylin[28], developing a similar procedure independently, were the first to perform the operation successfully on two human patients, aged twelve and twenty-seven years.

Gross has reported good results in 11 out of 16 operations attempted for correction of this anomaly[29]. In two cases, excision of the stricture was technically impossible and repair was not attempted. In one case, an adequate lumen could not be reestablished and no functional improvement resulted. A man thirty years of age, found to have a high degree of sclerosis of the aorta, died twenty-four hours after operation presumably from disruption of the suture line. One of the first patients operated upon by Gross died when the clamps obstructing the aorta were suddenly released upon completion of the anastomosis. The necessity for gradual release of

the clamps to permit adaptation of the vascular system to the enormous reduction in over-all resistance has therefore been emphasized. Patients less than thirty years of age, and preferably children, have been considered the only suitable candidates for surgery because premature degenerative changes in the aorta make the procedure difficult and hazardous. However, Clagett[40] has described a successful operation on a thirty-four year old man. In this case, the procedure of Blalock and Park, utilizing the subclavian artery, was used. No serious functional impairment resulted from division of the subclavian artery.

In all cases where a successful anastomosis has been made, pulse volume and blood pressure have increased in the lower extremities and blood pressure in the upper extremities has fallen to normal levels[34].

c. Patent ductus arteriosus. Since the first description of successful ligation of the patent ductus arteriosus by Gross and Hubbard in 1939[41], the surgical treatment of this congenital lesion has become an established procedure because (a) the life expectancy for an individual with this deformity is short, possibly only a little over half of normal[34], (b) operative mortality is low, and (3) spectacular results follow ligation of the duct.

Shapiro[42] has summarized all operative results described in the literature or reported to him personally. A total of 643 patients have been explored by 46 surgeons. Ligations of various types were performed in a total of 431 cases, 343 of which were uninfected and 88 complicated by bacterial endarteritis or endocarditis. The mortality for all uninfected cases was 4.9 per cent and for infected cases, 28.4 per cent. These figures are no longer valid, however, because the mortality rate has decreased more than 50 per cent since 1942[42,43].

Gross[34] emphasizes the technical problems encountered in patients over the age of twenty to twenty-five years, especially if cardiac failure or infection are present. In his series of 130 patients ranging in age from eleven months to forty-seven years, the over-all fatality rate has been 3.8 per cent. When adult cases are excluded, there has been only one death in a series of 90 operations. Because of the frequency of recanalization following simple ligation of the duct, Gross now performs a complete division and suture of the divided ends of the duct. Blalock[44] believes that division may subject the patient to unnecessary danger from hemorrhage. He has tried other less drastic measures to prevent recanalization but time has not permitted thorough evaluation of results.

Important diagnostic criteria are discussed in a recent clinical study of 37 cases of patent ductus arteriosus in which the diagnosis was confirmed at operation[45]. The presence of other congenital abnormalities such as pulmonic stenosis must be excluded when operation is contemplated because in such cases it may be fatal to obstruct the short circuit provided by the ductus. The use of catheterization of the right heart may clarify this point in doubtful cases.

Because of the uniformly spectacular results following obliteration of the duct when progressive cardiac decompensation or retarded growth has been present and the "cures" of bacterial endarteritis which were seen in 50 per cent of cases even before penicillin became available, surgery has been recommended for all young patients and for patients of any age as soon as the presence of bacterial endarteritis is proven[34,42].

In 1944, Burch[46] recommended operation for infected cases and those with progressive cardiac decompensation, but felt that the surgical risk (at that time reported to be 8.5 per cent) was too great to allow recommendation of operation for all patients with the anomaly. As mentioned above, however, the mortality rate is decreasing very rapidly.

Vesell and Kross[47] have suggested that when bacterial infection is not far advanced, penicillin therapy should be tried, surgery being reserved for cases in which the organism grown from culture is resistant to penicillin or in which a clinical trial of antibiotics is unsuccessful. Because of the technical difficulties and hazards of surgery in the presence of advanced infection, the advisability of such delaying tactics must be questioned. The advantage of preoperative preparation of infected cases, as discussed by Bradshaw[48] is obvious. He has reported operations with recovery in 3 cases in which embolic accidents had occurred prior to treatment.

d. Pulmonary stenosis. In 1945, Blalock and Taussig[49] described the successful employment in 3 cases of tetralogy of Fallot of an operation designed to improve the volume flow of blood to the lungs. The procedure consisted essentially of anastomosing the proximal end of a divided systemic artery with a pulmonary artery, thus forming an artificial ductus arteriosus.

The procedure is helpful only when disability arises from decreased pulmonary blood flow. Important signs pointing to this situation are (a) clinical and roentgenologic evidence of absence of congestion in the lung fields and (b) roentgeno-

logic evidence that the pulmonary artery is of diminutive size. The operation should never be attempted when the pulmonary conus is prominent or when pulsations are seen at the hili of the lungs[49]. In the absence of visible cyanosis at rest, the oxygen saturation of arterial blood should be measured under basal conditions and immediately after exercise[50]. Exploration is now advocated for borderline cases in which the prognosis is hopeless without operation. The most suitable age for intervention is between two and ten years but no definite age limits have been set. Blalock has performed successful operations on patients whose ages ranged from five months to twenty-one years.[50]

To determine as quantitatively as possible the effective pulmonary blood flow and size of collateral blood supply to the lungs, extensive studies have been conducted using right heart catheterization and analyses of blood and respiratory gases.[51,52] In the presence of pulmonary stenosis a reduction in pulmonary artery flow of from 1 to 2 liters below the normal cardiac index and abnormally high blood pressure in the right ventricle were found. Although studies of this kind cannot be conducted except at properly equipped centers, they may prove to be useful aids when clinical signs are equivocal and the improvement to be expected from surgery is doubtful.

The over-all mortality for a series of 110 operations performed by Blalock[50] was 23 per cent. Wide variations existed in the arteries arising from the aortic arch and either the innominate, subclavian, or carotid was chosen for the anastomosis, depending on existing conditions. Weakness of the opposite side of the body resulted when the carotid artery was used, but this was usually transient. When the subclavian artery was sacrificed, no significant interference with the circulation to the arm resulted. With one exception, all of the patients who survived the operation were improved and the artificial ductus remained patent. Neither heart failure nor bacterial endarteritis had developed at the time of this report. Functional capacity was often markedly improved, cyanosis disappeared, and polycythemia and clubbing regressed gradually. In two of the first cases reported, the oxygen saturation of the arterial blood increased from 36.3 to 82.8 and from 35.5 to 83.8 per cent immediately after the operation.

Potts et al. have devised another method of producing an artificial ductus arteriosus[53]. A side-to-side anastomosis is made between the aorta and the left pulmonary artery, employing a clamp which occludes only part of the aorta. The size of the artificial lumen is varied according to the estimated requirement for increased pulmonary blood flow. Three operations were performed in children having classical findings of tetralogy of Fallot. Two were greatly improved and there was one death.

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Actual Causes of Certain Occupational Dermatoses; Further Study of 532 Cases with Special Reference to Dermatitis Caused by Certain Petroleum Solvents.

The authors thoroughly investigated 1184 cases of cutaneous disease in industrial patients who presented claims for compensation and found that 532 cases were of occupational origin. This series combined with the cases of a previous study made a total of 1059 cases of occupational dermatoses observed. The actual causes were:

	Cases	%
Primary irritants (acids, alkalis, non-aqueous solvents)	308	29.1
Trauma and accidental injury	241	22.8
Sensitizing substances	155	14.6
Petroleum products and other causes (hydrochlorinated hydrocarbons, vegetable oil, dust) of folliculitis	116	10.9
Wet work (water alone, soap and water and alkaline salt detergents)	111	10.5
Cleansing agents applied to the skin	110	10.4
Physical and biologic	18	1.7

One of the interesting points demonstrated in this study is that primary irritants, trauma, and accidental injury caused 51.9% of the cases. Cleansing agents and wet work caused 20.9%, and sensitizing substances (allergens) caused only 14.6%.—Jos. V. Klauder, M.D., and Marjory K. Hardy, M.D.—*Occupational Med.* 1: 168-181, (Feb.) 1946.

Underwood & Underwood

ALICE STONE WOOLLEY, M.D.

In Memoriam

On November 16, 1946, the Journal of the American Medical Women's Association lost one of the most distinguished members of its Editorial Board. It was Dr. Wooley's enthusiasm and her faith in the future of medical women on which this Journal was founded and it is altogether fitting and proper that we should pause for a few moments to pay tribute to her memory. This spirit of cooperation should be the guiding force to lead the American Medical Women's Association she served so well and this Journal she brought into being to fulfil their highest purposes. Dr. Woolley never doubted the need of a central organization for medical women and as president of the American Medical Women's Association and chairman of its Committee on International Affairs she advanced social and medical activities not only in her own locality but throughout the nation and the world. Her belief in the power of women when properly organized, not only in the field of medicine but in all other activities, was always uppermost in her mind. To know her was to be strengthened in the faith in womanhood and the dignity of the position it must occupy in the future of the race.

IN MEMORY OF ALICE STONE WOOLLEY

Physician, Community Leader, and Friend

Dr. Alice Stone Woolley will be gratefully remembered by a host of people in Poughkeepsie and afar. Today and for years to come her friends will honor her for her gracious personality and her professional excellence. Recently, as a minister in the city of my boyhood, I renewed an association with Dr. Woolley begun during college years. In vacation periods we came to know of her work

for the youth of our community as Director of Health Education in the Young Women's Christian Association. Little did some of us realize back in 1908 that she would become a valued friend and the physician of three generations of our families.

Those days of her youthful vigor and gracious charm were prolonged far beyond the usual span of most people. The keen interest in others, so essential for effective service in the Christian Association, proved a never failing source of helpfulness in her professional career in this city. In addition to her medical knowledge and skills she possessed the facility, so greatly stressed by the late Dr. Richard C. Cabot of Harvard, of clear comprehension of a patient's physical background and social environment. She was ever ready to give her time and support to our local civic and service agencies, especially to work for young women and girls. Her unusual capacity for creating confidence and for including so many in the circle of personal friendship may be traced back to those days when she was associated with Miss Mary Ellen Reid, Executive Secretary of the Young Women's Christian Association.

These two women became life long friends and worked together to forward many of the outstanding projects of Dutchess County. Their home, the beautiful old homestead "Stoneridge", was always the center of gracious hospitality. Dr. Woolley's niece, Elizabeth Woolley, made her home with them.

Recently Miss Reid said of her: "Dr. Woolley had a rare gift of leadership and her personal charm and vibrant personality endeared her to all with whom she came in contact. She gave time and thought to the promotion of women's interests, not only in her community, but in her country as well. She was a firm believer in the power of God in our lives. She not only gave physical help, but also spiritual guidance to the many who came to her. Mingled with the sadness of losing her is a feeling of inspiration in the memory of her lovely character, her buoyant spirit, and her utter unselfishness in the service of others."

During the first World War she was sent to France by the Young Women's Christian Association as one of the workers for the girls and women of Tours, France. She served for two years and received from the French Government the Medaille de la Reconnaissance Francaise.

On her return from France Dr. Woolley decided to study medicine. After receiving her B.S. degree from Columbia University in 1923, she continued her studies in the College of Physicians and Surgeons of the University of Maryland and was graduated in 1930 with the degree of M.D. After an internship at the Gallinger Municipal Hospital and the Children's Hospital, Washington, D.C., she returned to Poughkeepsie to establish a general practice and to serve the community which she loved so well. She became one of the outstanding physicians in Dutchess County and was known and honored in the state and nation. She served on the Boards of the Hospitals and of the Welfare and Social organizations of the city.

Shortly after her return to Poughkeepsie letters from my family told of Dr. Woolley's great helpfulness, particularly to my mother who at that time was encountering some of the perils of advancing age. The Doctor's strength of faith combined with her professional excellence can best be appreciated by those who stand by to watch the struggle of a loved one in the last moments of life. Although I count many doctors among my personal friends since my term of service in the Peking Union Medical College and Hospital as Director of Religious and Social Work, I have never heard of one who has given again and again more generously of time and strength in a time of crisis, such as all families must occasionally face. Time and time again word has reached me of her surpassing kindness and efforts "beyond the call of duty."

Dr. Woolley's career as a physician, was relatively short, but the measure of one's life is taken not alone by chronology, but also by standards of quality, by degrees of intensity, and by the influence of total personality. In these respects as a physician she won a superior place. Dr. Lloyd C. Douglas in his novel about doctors, "Disputed Passage," vividly illustrated a general principle which her life embodied. Great excellence is achieved by overcoming great obstacles. She undertook the arduous course of a medical career at a time when many another person would gladly have settled down to ease and comfort. Her life was surrounded with much that was good, but she belonged to those who give to life more than they take from it. She walked among us as one who served her fellowmen and the Great Physician, the love of whom sustained her to the end.

After her long convalescence in California few of her friends could see her because her strength was so limited. In one of our last conversations I spoke of her resolute will and her calm acceptance of being served by another. She replied, "I wanted very much to come home, because there are so many matters that I still want

to do here." We cannot say whether she did all that she had in mind, but we do know that wherever Alice Stone Woolley went she thought of home as a place where people came so often to be served and from which she went forth daily to serve. Her unfinished tasks others are now assuming and those who knew her and admired her have an abiding influence in their lives for devoted service to our day and age.

PHILIP ALLEN SWARTZ, D.D.

The Rev. Dr. Swartz has been pastor of the First Congregational Church, Poughkeepsie, New York, since 1940, and a close friend of Dr. Woolley.

A TRIBUTE

Alice Stone Woolley was beyond her youth when she entered medical school. Before she died in November, 1946, she stood in the front ranks of the medical profession.

Two words—quest and achievement—will define much in connection with her work; but it is of herself I write, and not of her work.

Lofty in her thoughts, Dr. Woolley was drawn with unerring precision to the best that came within her range. A compelling and contagious ardor enabled her to instill in others her own devotion to and enthusiasm for the task to be done. To those qualities, perhaps, this medical magazine owes much of its initial success.

Together with unconquerable courage and independence, Alice Woolley's character was marked by sweetness, dignity, truthfulness, and unfailing kindness. Faithful and generous, she was quick in sympathy for others, with rare understanding of their needs. In ordinary relations she had a fine simplicity and reserve; and into dull corners of commonplace lives she shed the mellow light of her joy and humor. A simple and unassuming Christian whose faith was triumphant, she knew the values of life and strove to preserve her own. While not unmindful of its vagaries and inconsistencies and sorrows, she had a quiet certainty that all life is fundamentally beautiful. At the heart of things she saw the essential value, and one felt that she was ever conscious of an ineluctable spiritual presence.

Her days were already rich in fulfillment when "from the hills the last horn spilt its immortal note." The impression of beauty of soul which she left for our remembrance defies death in a world of decay and disillusionment.

LILLIAN E. SHAW, M.D.

"AFTER GLOW"

IT IS FITTING that this number of the JOURNAL should serve as a memorial to Alice Stone Woolley on the first anniversary of her death. For no project of the Association was closer to her heart than this which she spoke of as a means of keeping our scattered membership closer together. That membership can offer no better tribuate to her than a willingness to foster the JOURNAL's growth through approbation, constructive criticism, and personal contributions worthy of her high hopes for it.

There are those among you who will wonder at the loyalty to her, implicit in this memorial number. But you were not among those so fortunate as to share the radiance of her charm, the sparkling metal of her mind, the great glow of her love, or the directness with which she faced life. Those of you who did share friendship with her will find a ready answer in your hearts to the little poem among a collection which she carried with her always. Might it be given to each of us to fulfill our destinies with as sure a heritage of love!

DOROTHY WELLS ATKINSON, M.D.

"The day died in a flood of
crimson flame
That bathed the hills in
beauty richly rare,
And all the world bowed down,
and I, too, came
To stand in wonder and to
worship there.

And then a small voice seemed
to question me;
"When death shall come and I
must gladly go,
Will there be one to love my
memory?
O, Lord, shall I, too, leave
an after glow?"

Author Unknown.

INTERNATIONAL SECTION

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION

PROF. A. CH. RUYS, *President*
Hanthorstratt 50, Amsterdam Z,
The Netherlands.

DR. DORIS ODLUM, *Hon. Treasurer*
56 Wimpole St.,
London, W.1., England.

DR. G. MONTREIL-STRAUS, *Hon. Secretary*
75 rue de l' Assomption,
Paris, xvl, France.

Medical Women in Germany

GABRIELE STRECKER, M.D.

THE FIRST GERMAN WOMAN physician, Dorothea Erxleben, graduated from a Prussian university (Halle) in the year 1784, having obtained a special license from Frederic II to pursue the study of medicine. An early and solitary pioneer for the right of women to engage in professional studies, she was the author of a pamphlet entitled: "Inquiry into the reasons which withold the female sex from university studies." A fundamental premise of the Women's Rights Movement is that women have a right to the same educational advantages as men; but it was not until 1908 that the German Reich officially opened the doors of the universities to women. Six years before this, they were privileged to enroll as listeners at the university lectures, but they were not allowed to matriculate. In order to become graduate doctors they had to go to Switzerland.

In 1876 the first two German medical women, having received their degrees in Zurich, settled in Berlin, where they were regarded with varying degrees of amusement and intolerance and were stigmatized as quacks by their male colleagues. The response of the patients was, however, comparatively favorable. These women founded the "Clinic of Women Doctors" in Berlin, the only such clinic ever established in Germany.

Through the radio station at Frankfurt, Germany, where she is in charge of programs for women, Dr. Strecker is attempting the difficult task of bringing to the women of Germany an understanding of the democratic way of life.

It is interesting to note the increase in the number of women in medicine in Germany during the twentieth century: In 1909, there were 82 medical women; this number had increased in 1927 to 1739; in 1929 to 2562; and in 1933 to 4367.

In 1911 there were 555 women studying medicine; in 1929 there were 3428, a sevenfold increase, whereas the number of men medical students had only doubled in the same time. The total number of medical students in 1930 was 14,827.

In 1923 German medical women founded an Association of Medical Women and published a quarterly review; but this organization was ineffectual because the women under the pressure of the big official medical organizations gave up their struggle for any material or professional improvement in their own ranks. They were limited to merely theoretical and restricted subjects, such as women's sports from the point of view of a woman doctor, social welfare for women under arrest, etc. The Association, which had already proved ineffective in representing the true interest of its members, was further weakened by the lack of interest of the women in their own careers.

The general attitude of medical women was consistent with the strange German characteristic of isolation from community life, and thus there was not a sufficient number of women capable of raising the professional standard. It may be that the possibilities of better chances for marriage at that time, the '20s and '30s, favored this blindness to the real situation; but since the number of married medical women was comparatively high, a new problem arose, that is, the problem of the so-called double wage earners, which seems to exist only in Germany. When the two partners of a marriage both earn a living, this is considered unsocial, and the general unwritten custom or ethics compel the woman to resign. But this custom is applied only to women in the medical profession or in the field of education, never to women of the laboring or farmer classes. In 1933, when the Nazis changed the whole picture of German life, they immediately issued the first restrictions against women doctors, saying that in cases where the husband was able to support his family, the wife was not granted permission to continue the practice of medicine, especially not to treat social insurance patients. In spite of this, there were many exceptions.

Since public life during the Nazi period was a life of complete silence and dissolution of former organizations, the Medical Women's Association, which had previously joined the Federation of German Women's Organizations, as well as the Medical Women's International Association, was dissolved. The Federation itself was deliberately dissolved by its president in May, 1933.

The general attitude of the Nazi government towards women was definitely reactionary. Nevertheless, a massive propaganda against women students met with no success. It is an interesting psychological fact that the worldwide trend to white collar jobs and to the academic professions could not be hampered by government measures. As concerns the study of medicine, the figures of the University of Frankfurt can be considered as typical of conditions in other German universities. In the University of Frankfurt during the summer of 1938 there were 597 students of medicine, about one third of whom were women; in the winter of 1938-39, there were 611 students, again about one-third women; in the summer of 1939, there were 625 students, about one-third women. During the war years the proportion was about fifty-fifty. But an almost incredible change took place in the summer of 1947, when there were 1799 students, among them 652 women.

I have attempted to ascertain the number of women practicing medicine at this time; but because of the lack of adequate statistics in Germany this has been impossible. From the tremendous increase of students during the war certain conclusions may be drawn.

Let us consider the effect upon medical women of the division of Germany into zones and see how this division affects them economically and socially. Barbara von Renthe, a leading physician in Berlin, who claims no political affiliations, was kind enough to give me the following information:

> The Russian occupied zone has a total of about 11,000 doctors, of whom 35 to 40 per cent are women. Conditions are absolutely the same for men and women. We find a number of women in the best positions, as university teachers, chiefs of great hospitals, etc. (Dr. v. Renthe herself is vice-president of the Board of Medical Affairs for the Soviet zone.) Since there is no discrimination against women there is no problem of double wage earners. When a woman receives permission to practice, the license specifies that she must treat patients included in the social insurance bracket, panel patients, a highly desirable privilege, being the economic backbone of a doctor's practice. About 92 per cent of the population in the Russian zone are panel patients and have therefore lost the status of private patients. The danger to the medical profession is that the doctors may become mere employees of the powerful, government controlled bureaus. Logically the doctors are organized into a special group of Free German Trade Unions, but there is no obligation to join it. This is an indication of the decline of a once proud and essentially liberal and independent profession. It is a sad one.

The situation in the western zone is different. The first medical women's association was founded in 1945 and licensed by the Military Government in 1947. This is the Association of the Medical Women of Wuerttemberg-Baden, the purposes of which are defined as maintenance of the economic interests of medical women (a marked difference from the association formed after the first world War) and practical participation in the burning problems of our time. The members of this association are opposed to any discrimination against married women physicians, and want representation on medical boards and an adequate number of women on committees in charge of the distribution of man power in the medical field. In addition, they have passed various resolutions on the question of laws covering

abortion; and they sent a resolution on the food situation to OMGUS Berlin, and asked that the quality of the food be improved.

In Bavaria, medical women associations are being formed, and the same is true in the British zone, where women in Hanover and Hamburg are trying to organize along the same lines as those in Wuerttemberg-Baden. The women doctors of Hesse recently assembled for the first time in Frankfurt and discussed with leading men on the board of physicians the problems confronting the women practicing in Greater Hesse. The attitude of the men on the question of double wage earners proved to be inelastic. They argued as follows: "Since there is an excessive number of doctors we face an economic collapse, a thing never before encountered in the history of the profession. We cannot take the responsibility of permitting a married woman to practice when there are innumerable men who cannot make a living as resident doctors or as free practitioners."

The proportion of patients is 600 to 1200 to 1 doctor, a figure far below the 3000 patients which was considered as the minimum to give a basis for a living. The erroneous belief that there was a lack of doctors in Germany was due to the temporary shortage during the first months after the crash of the Reich. This is now overcome by the return of the army doctors, by the many doctors among the 12 million refugees, by the fugitives from the Russian zone, and, finally, by the influx of young doctors.

The problems which face every class of German man power exist in the medical field. There are too many who want a good job, very few well trained, too few well equipped practices because of the destructions. If an overcrowded waiting-room of a well known doctor, usually a specialist, seems to refute these statements, it is because nearly everything in the lives of the Germans depends upon a medical clearance, or a medical bulletin, or acknowledgement, reducing the doctor to a mere writing official of the various public institutions.

This development involves a certain danger for the medical woman. It is still doubtful whether an interzonal association of medical women would be strong enough to oppose efficiently the tendencies of the men to restrain the women. On the other hand, there is a certain political danger that the German leftists will use the better situation in the Russian zone as a means of propaganda, though there is no question here that the privileges for women in the Russian zone are offered only at the price of individual freedom and human dignity. It is possible that the medical women of Greater Hesse may not form an independent association but instead will join the impartial big Hesse Women's Association, which will be able to give them a greater chance for stating their rights. At any rate, the German medical woman's problem is involved in the problem of all German doctors. It is no longer a problem of equal rights, since both public opinion and German constitutions in the different lands confirm their equal status and since theoretically the German woman may aspire to any position. The crux of the matter is this: men do not want to give up positions to women in this country where there is a strong struggle for life. It is impossible at this stage to determine whether the medical profession will be forced to pursue only socialized medicine or whether they will be able as they have been in the past to continue a policy of more or less free enterprise based upon free competition.

MEETING OF THE INTERNATIONAL COUNCIL OF WOMEN

SEPTEMBER, 1947

WOMEN FROM thirty-seven countries, representing between eight and ten million members in their home countries, were recent delegates to the first post-war meeting of the International Council of Women. An overall attendance of 1500, including alternates and guests, met at Houston Hall of the University of Pennsylvania, in Philadelphia, September 3 to 12.

The Baroness Pol Boel, of Brussels, Belgium, who has been head of the organization since the last pre-war meeting in Edinburgh, Scotland, in 1938, retired and Dr. Jeanne Eder-Schwyzer, a chemist, of Zurich, Switzerland was unopposed to take her post.

The busy week of reports, conferences, resolutions and plans for action terminated in a nine-point declaration of principles condemning war and pledging support to the United Nations.

The complete text of the declaration follows:

1. The International Council of Women affirms once more its determined protest against war and aggression in any form.

2. It condemns the crimes committed against

humanity and against the dignity of the individual in the unsettled international conditions before, during and after the war, and considers the recognition and guaranty of human rights as an essential condition for the maintenance of peace and for the establishment of the rule of law.

3. Since the organization of aggressive war has been recognized by international courts as a crime, the I. C. W. urges all women of the world to demand that all international disputes be settled by international courts.

4. It will support with all its power the United Nations in its work for the establishment and maintenance of a just and durable peace.

5. It demands a greater and more active participation of qualified women in the government of the respective countries and urges a more active participation of women in elections both as voters and as candidates.

6. It protests against the relative lack of women members in the various committees and commissions of the United Nations.

7. It recalls once more its principle of "equal capacity, the same responsibility" and "equal pay for equal work".

8. It affirms its faith in the idea which it has upheld for nearly 60 years: to unite women of the whole world without distinction of race, nationality, faith or class in order to promote the welfare of the individual, the family and humanity.

9. It finally asserts its firm determination to give the unconditional support of its constructive force and power to the solution of human problems.

Before a capacity audience at a banquet held in the Bellevue-Stratford, Assistant Secretary of State Charles E. Saltzman told the delegates that the United States is determined that the industrial life of Germany must be revived as an essential part of European economic recovery.

The American people, he declared, are prepared to make sacrifices now in behalf of the peace rather than to invite the greater sacrifices that would be demanded by a third world war.

Echoes of the war and the still troubled state of Europe came to the convention through women from Greece, Czechoslovakia, and the Netherlands.

Mrs. Sophia Antoniades, president of the National Council of Women of Greece, told the convention that her country was still at war, fighting against forces thirty times as strong as her own, and appealed to the women of the world for help.

Two women who died during the Nazi regime, Senator Frantiska Plaminkova of Czechosolvakia who was hung and Miss Rosa Manus, Dutch suffragist leader, who died in a concentration camp, were honored at a memorial service during the convention week.

Among the women physicians who attended the meeting were Dr. Thullier-Landry of France, Dr. Genevieve Rewcastle of Great Britain, Dr. Signe Swensson of Norway, Dr. V. C. J. McPherson of South Africa, Dr. Renee Girod of Switzerland, Dr. Lore Antoine of Austria, and Dr. G. Bonser of Great Britain.

Medical Women from Abroad Visit the Woman's Medical College of Pennsylvania—**The Woman's Medical College of Pennsylvania, the only school in the Western Hemisphere founded to give medical education to women, was the mecca for women physicians from abroad who were attending the meetings of the International Council of Women, held recently in Philadelphia.**

Pictured at the College are *(left to right, back row):* Dr. Lore Antoine, skin specialist from Vienna, Austria; Dr. Georgiana M. Bonser, cancer specialist from Leeds, England; Dr. Catharine Macfarlane, Research Professor of Gynecology, Woman's Medical College; Dr. Marion Fay, Dean, Woman's Medical College; Dr. Edna Guest, O.B.E., Public health physician, Toronto, Canada.

***(Front row, left to right):* Dr. Christine Bader, pediatrician, Arnhem, Netherlands; Dr. Malaur Papadinnedron, Athens, Greece; Dr. Veronica C. J. McPherson, Johannesburg, South Africa.**

REPORT OF THE HONORARY TREASURER OF MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION

The Treasurer presented the Balance Sheet for the period from 1 May, 1946, to 30 April, 1947. She stated that there was a balance of £291.0.9. in the bank on 1 May, 1946. Subscriptions for 1946 had since been received amounting to £155.3.3. This was made up of £10.0.0 from Sweden and £145.3.3. from the U.S.A. Dr. Odlum then went on to say, "It was agreed at our last Council meeting that our regular subscriptions should start for the year 1947, but if any country felt able to give any subscription for 1946 we should be very grateful, and the two countries mentioned did that. Since the Balance Sheet was published there has been a further receipt of £43.7.0. from Canada for the war years and 1946, and a Bond on the Dominion of Canada for $250 which is approximately worth £50.0.0.

As regards 1947, since we are only half way through the year we have not yet received all the subscriptions. It was agreed at the Council meeting in London in September 1946, in respect of this year that the subscription rate should be reduced from 2/- to 1/- in view of the difficulty that certain countries who have suffered from the war would have in paying the old rate of 2/- but it was hoped that if any country could afford it, or more, they would be gracious enough to pay at the old rate of 2/-. Several countries have done this and we have received the following: Finland £5., Denmark £20., Norway £9.6., France £7.4., Sweden £10.10., Britain £110., for the first instalment, and we shall get another instalment making in all about £170. from Great Britain. We have yet to receive the American subscription which may be about £100. so that at the end of this year we shall have received in all a total of about £325. at least.

Against this we have to put our expenditure which from May 1, 1946, to April 30, 1947, was as follows:

Secretary's expenses	£ 70
Printing & Stationery	55
Postage & Telephones	22
Special Congress Expenses	12
Interpreting & Reporting for the Congress	63
Traveling Expenses	15
Hire of Room	5
Sundry Expenses	4
	£146

In addition we owe Madame Montreuil-Straus £84.0.0.

We shall require another £100.0.0. at least for secretarial expenses for the rest of the year, probably £80.0.0. for printing the bulletin, and £100.0.0. for other Conference expenses, so that as far as we can judge we should have about £250.0.0. to carry forward at the beginning of 1948. We shall be solvent but we shall not have a great deal of money to carry forward*.

Doris M. Odlum, Hon. Treasurer,
Medical Women's International Association.

*Dr. Odlum adds that at the meeting of the Executive Committee held recently in Paris, it was found that the secretary's salary and Insurance tax would be higher than had been anticipated, so that there will be about £100 less to carry forward to 1948.

CANADA'S HEALTH AND MEDICAL FILM PROGRAM

Lilias Savage

A few months ago one hundred and fifty "government girls" in Washington, D. C., were shown two films on venereal disease at a health interest group meeting held under the auspices of the U. S. Public Health Service. One of the films, "Sixteen to Twenty-six," was produced for female audiences by the National Film Board of Canada under the sponsorship of the Dominion Department of National Health and Welfare. Those girls who felt that they had gained more information from the Canadian film were asked to give the reasons for their preference. These were typical replies: "Straight from a doctor" . . . "Gave symptoms and results" . . . "Like the moral aspect" . . . "Did not preach as much as the first picture."

The National Film Board, the official film producing and distributing agency of the Canadian Government since 1939, is constantly handling films which take audiences into their confidence rather than "preach" at them. During the War, the Board's films reviewed the various aspects of Canada's war effort and linked the home and fighting fronts. Today's programs, however, concern themselves with the United Nations, overseas relief, housing, rehabilitation, and, more particularly, health and welfare problems. One subject plays each month in Canadian theatres and, in addition, community film councils and National Film Board traveling projectionists are bringing posters, charts, and public information films right into schools, citizens meetings, and village halls.

Organized women's groups have shown such interest and co-operation in the Board's work that plans are now afoot to set up evaluation panels which will enable the women of the Dominion to preview and appraise new health and welfare films and advise the Board on pressing community film needs.

Health and medical films produced in the United States are constantly crossing the border for evaluation by Canadian medical groups and for subsequent listing in the National Film Board's Public Health and Medical Film Catalogues. At the same time, Canadian-made films are proving of value in many States of the Union. "Sixteen to Twenty-six" has been incorporated into the War Department's WAC training program, and with its companion film, "Very Dangerous," designed for male audiences, has found a place in State Board of Health and Education film libraries.

The first in a new series of films on mental health was previewed for delegates to the American Psychiatric Association convention last May. This 20-minute subject, "The Feeling of Rejection," is a visual case history of a neurotic twenty-three year old girl.

Health and medical problems are, unfortunately, ever present and world wide. Only by sharing these problems can we hope to bring about their solution. This fact is clearly recognized by the United Nations in setting up the new World Health Organization. Canadians today are studying child welfare rudiments in a Swedish film; psychiatry, syphilis, and tuberculosis in American films; care of the eyes in a British film. The National Film Board, by its activities in Canada and abroad, hopes to contribute not only to an increased public interest in the solution of pressing public health problems, but also to a fuller measure of international understanding.

Editor's Note:

The films described in the above article are available for rental and purchase in the United States. Inquiries should be addressed to the following offices of the National Film Board of Canada: 620 Fifth Avenue, New York City; 84 East Randolph Street, Chicago 1, Illinois; and the Canadian Embassy, 1746 Massachusetts Avenue, N.W., Washington 6, D. C.

FOURTH SESSION OF WORLD HEALTH ORGANIZATION INTERIM COMMISSION

The Fourth Session of the World Health Organization Interim Commission which met at the Palais des Nations in Geneva from 30 August to 13 September gave material support on an international scale to mankind's eternal fight against disease.

Representatives from 15 nations decided on:

(1) Positive, aggressive action to combat such world-wide public health menaces as tuberculosis, malaria, venereal disease, and influenza.

(2) Plans for the First World Health Assembly, which is expected to be held next spring or summer.

(3) Budget to finance its 1948 program.

Attending the sessions were representatives from Australia, Brazil, Canada, China, Egypt, France, India, the Netherlands, Norway, Peru, United Kingdom, U.S.S.R., U.S.A., Venezuela, and Yugoslavia.

Dr. Andrija Stampar (Yugoslavia), President of the Yugoslav Academy of Sciences and Arts and Professor of Public Health and Social Medicine, University of Zagreb, is WHO.IC Chairman. Dr. Brock Chisholm is Executive Secretary.

Tuberculosis: Because tuberculosis has assumed epidemic proportions in some countries, the WHO.IC agreed to send small demonstration teams to countries asking for assistance to initiate intensive programs of BCG vaccination. BCG has been used widely in some countries to prevent tuberculosis, and it was agreed that information on its use should be made available to all peoples desiring it.

Need for evaluating and standardizing uses of the relatively new antibiotic streptomycin in the treatment of tuberculosis was recognized when the WHO.IC agreed on an early conference of international experts with practical experience in this work.

A long-range anti-tuberculosis program to be presented to the First World Health Assembly was deferred until the WHO.IC Fifth Session.

Malaria: The WHO.IC agreed to hold the second meeting of the Expert Committee on Malaria in Washington, during the Fourth International Congresses on Malaria and on Tropical Medicine in May 1948.

Influenza: To help combat or prevent another world-wide influenza epidemic such as took place in 1918 and 1919, an International Influenza Center in England was authorized. The offer by Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service, to make available the National Institute of Health in Bethesda, Maryland, as a regional influenza laboratory, was accepted with thanks.

Yellow Fever: Regular testing of approved yellow fever vaccine was proposed as a question for the WHO.IC yellow fever panel to consider at its first meeting.

New Expert Committees: An Expert Committee on Venereal Diseases and another for revising existing sanitary conventions will be set up in the near future.

Because syphilis and gonorrhea have increased in alarming proportions, it is hoped that international experts on venereal diseases will be able to meet before the end of the year to plan a world-wide campaign.

The new Expert Committee on International Epidemic Control will re-study existing international conventions to prevent epidemics from spreading around the globe and to cope with the problem of disease control in connection with modern developments in transportation by land, sea, and air.

Draft texts of the International Sanitary Regulations to govern the annual pilgrimage to Mecca of thousands of persons were noted by WHO.IC.

Quarantine: An Expert Committee on Quarantine, previously authorized, was asked to consider, during its first meeting on 24 November in Geneva, an international schedule for disinfecting aircraft. Such a code would be a considerable boon to international transportation.

Protests by the Government of India on demands of health authorities of Hong Kong, Singapore, and British Malaya that all smallpox vaccination certificates of travellers from India be signed by either a governmental or municipal medical officer were referred to this Expert Committee.

Alcoholism: The WHO.IC decided to call the attention of the First World Health Assembly to this problem and asked that a study be made in co-operation with other United Nations agencies.

Plague: Plague, which has been an international medical problem for thousands of years, was placed on the agenda for the First World Health Assembly.

Insulin Supply: The WHO.IC Secretariat was instructed to carry on further studies on the adequacy of present and future supplies of insulin.

World Health Assembly: The WHO.IC decided to hold the First World Health Assembly in the Western Hemisphere, with the final selection of a definite site left to the WHO.IC Chairman, Dr. Stampar. The World Health Assembly must be held within six months after the 26th United Nations member ratifies the WHO consitution. To date, 15 UN members have approved the document: Canada, China, Ethiopia, Haiti, Iran, Liberia, the Netherlands, New Zealand, Norway, Saudi-Arabia, Sweden, Syria, Turkey, the United Kingdom, and the Union of South Africa.

Reports during the Fourth Session indicated that ratifications might be expected within a few months from Yugoslavia, Brazil, France, and Denmark and that the United States and India probably would act by early 1948.

Budget for 1948: To carry on the necessary work of protecting the health of the globe, the WHO.IC approved a 1948 budget of $1,528,324 for its general fund. In addition, $1,500,000 from United Nations Relief and Rehabilitation Administration (UNRRA) will finance a field services program with such items as approximately 200 fellowships so that doctors, nurses, and public health specialists may study recent advances in practices outside their native lands; missions of international experts to countries asking for outside assistance in setting up and managing medical and health programs; and funds for helping war-devastated countries rebuild their medical libraries.

WHO.IC Awards Fellowships: The World Health Organization Interim Commission this month announced that 89 foreign public health specialists had been selected to receive fellowships so that they may study outside their homelands during the coming year. The distribution of the initial 89 experts by countries of origin is as follows: Austria, 5; China, 18; Czechosolvakia, 19; Finland, 8; Greece, 2; Northern Korea, 2; Philippines, 3; Poland, 4; Southern Korea, 2; and Yugoslavia, 26.

Fellows are nominated by their governments in accordance with a program approved by WHO to foster the dissemination of medical knowledge and progress to the widest possible extent and to aid in rehabiliating public health in those countries ravaged most by war.

ORGANIZATION

Official Reports and Announcements of the Association

REPORT OF HISTORY OF MEDICINE COMMITTEE

The following members have been invited to serve on the History of Medicine Committee: Dr. Elizabeth Mason-Hohl, Hollywood, California; Dr. Elizabeth Bass, New Orleans, Louisiana; Dr. Kate Savage Zerfoss, Nashville, Tennessee; Dr. Irma Henderson Smathers, Asheville, North Carolina; Dr. Ruth Weber Rumsey, Miami, Florida; and Dr. Mary Suarez Swilling, Macon, Georgia.

This distribution gives widespread representation and I hope each will accept. I am awaiting replies which I hope will include suggestions as to how this committee can best contribute additional information to that already obtained.

I assume, as the name implies, we are trying to get facts, figures, attitudes, influences, achievements, pictures, publications, etc., concerning medical women. Many of the readers of this Journal will know interesting bits of pioneer history, women physicians who have served modestly but efficiently and should not be forgotten, others who are contributing to medical history at the present time about whom most of us know nothing.

This is an appeal to any reader of the Journal, medical or not, for suggestions of persons to be seeked out or methods by which this committee can serve most efficiently. The committee cannot do a good job unless the individual members help us. Please look around your section and forward to me whatever data you dig up. Autobiographies will be most welcomed.

Address your letters to: **Elisabeth Martin, M.D., 56 Fifth Street, N.E., Atlanta, Georgia.**

QUESTIONNAIRE

Please answer this questionnaire carefully. It is YOUR Journal—tell us what you want! Rate each of the following departments in the order of its interest or value. Mark 1 for first choice, 2 for second and so on to 15 for last choice.

Rating

..... A. SCIENTIFIC ARTICLES

..... B. SYMPOSIUM—RECENT ADVANCES (THIS DEPARTMENT APPEARS AS A REGULAR FEATURE, COVERING ALL FIELDS OF MEDICINE, ONE IN EACH ISSUE)

..... C. CASE REPORTS (E.G. SEE MARCH)

..... D. BOOK REVIEWS

..... E. CURRENT PUBLICATIONS

..... F. EDITORIALS

..... G. ORGANIZATION (OFFICIAL REPORTS OF A.M.W.A.)

..... H. OPPORTUNITIES FOR WOMEN IN MEDICINE (ARTICLES)

..... J. INTERNATIONAL NEWS AND INTERVIEWS

..... K. ARTICLES BY FOREIGN WOMEN PHYSICIANS

..... L. BIOGRAPHICAL SKETCHES (E.G. ELIZ. BLACKWELL—MARCH)

..... M. LEGISLATION

..... N. MEDICAL COLLEGE AND STUDENT NEWS

..... O. NEWS OF WOMEN IN MEDICINE

..... P. PUBLIC RELATIONS (E.G. JUNE). TO INCLUDE (1) TALKS BY WOMEN PHYSICIANS TO LAY GROUPS IN INTEREST OF HEALTH EDUCATION AND MEDICAL INFORMATION — RADIO TALKS, ADDRESSES AT MEETINGS, ETC. (2) NOTES OF THEIR PARTICIPATION IN GENERAL AFFAIRS, NOT LIMITED TO MEDICINE.

We may find it necessary because of present paper shortage to cut down on the size of the Journal. What departments would you omit entirely?

What departments would you cut in size?

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Do the Book Reviews influence your purchase of books? Yes..... No..... Are you interested in articles on Legislation Affecting all Women? Yes..... No.....—affecting only women physicians? Yes..... No..... Please mail to: Helen F. Schrack, M.D., Chairman of Publication Committee, 216 North Fifth Street, Camden, N. J.

Please add your comments and suggestions:—

PROGRAM MID-YEAR BOARD MEETING

December 6-7, 1947
Hotel Netherland Plaza
Cincinnati, Ohio

December 6

9:00 A.M.—Registration.
10:00-12:00 A.M.—Business Meeting.
12:30 P.M.—Luncheon, Netherland Plaza Hotel.
2:00-5:30 P.M.—Business Meeting.
7:00 P.M.—Dinner Netherland Plaza Hotel.
(Program to be announced)

December 7

9:00 A.M.—Business Meeting.
11:00 A.M.—Drive. The home of Elizabeth Blackwell and other points of interest shown.
12:00 P.M.—Luncheon at Cincinnati Country Club.
3.00 P.M.—Tea. Compliments of Dr. Aurelia McIntyre.

Hotel Netherland Plaza will have room accommodations for you. Please make your reservation early and state when asking for it that you will be attending the A.M.W.A.

The committee on local arrangements will be ready with any help they can give you. They will appreciate your reservation in advance for the luncheons and dinner.

Dec. 6—Luncheon $2.50, dinner $3.00.

Dec. 7—Luncheon $3.00.

Esther Marting, M.D.
Chairman, Committee on Arrangements
Connors Landing, New Richmond, Ohio

SPECIAL NOTICES

Officers, Committee Chairmen, Directors, and Branch Delegates:

Please have your reports sent in triplicate to Dr. Mabel E. Gardner, President, 129 S. Main Street, Middletown, Ohio, by November 14, so that they may be reviewed by the Reference Committee before the meeting.

* * *

Please send all resolutions and items for discussion to Dr. Gardner by November 14.

* * *

Will each member give careful consideration to the topics suggested for the 1950 Congress of the Medical Women's International Association (as published in the September **Journal of the A.M.W.A.**, Pp. 413-414) and indicate her choice to the Branch delegate or to one of the officers so that a decision may be made by our Association at the Board Meeting in December.

Helen F. Schrack,
National Corresponding Secretary to the M.W.I.A.

* * *

Dr. Dora F. Sonnenday Chairman, Nomination Committee, 145 W. McMillan St., Cincinnati 19, Ohio, invites nominations from your region for the offices to be filled at the Annual Meeting in Chicago, June 19-20, 1948.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.

APPLICATION FOR MEMBERSHIP

☐ Active. $5.00* ☐ Associate. No dues ☐ Life $100. ** ($50 in two payments)

(Active, associate, and life members receive the official publication. Active and life members receive membership in Medical Women's International Association.)

Dr. .....

(Please print name as you wish it to appear in Year Book)

Address .....

.....

Medical School ..... Year of Graduation .....

Other Degrees .....

Licensed in County ..... State .....

Member County Society — Yes ☐ No ☐ Fellow A. M. A. — Yes ☐ No ☐

Specialty ..... Specialty Board — Yes ☐ No ☐

Place of birth—City ..... State ..... Single; Married; Widow .....

Date of Application ..... Signature .....

Endorsed by *(No endorsers necessary if applicant is a member of a County or State Medical Society)*

1 ..... M.D., Member AMWA

2 ..... M.D., Member AMWA

NOTE: Make check payable to American Medical Women's Association, Inc.

Mail this blank and check to Treasurer, MARY RIGGS NOBLE, M.D., Bowmansdale, Pennsylvania

*Effective January 1, 1948. Dues for 1947 are $3.00.
**Effective January 1, 1948. Life membership for 1947 is $50 ($25 in two payments).

Opportunities for Medical Women

PHYSICAL MEDICINE—A PROFESSION FOR WOMEN PHYSICIANS

NILA K. COVALT, M.D.

Assistant Chief of Physical Medicine,
Medical Rehabilitation Service, Veterans Administration, Washington, D. C.

IT HAS BEEN SAID that Orthopedics as a specialty, was the outcome of World War I, and Physical Medicine as a specialty, is the outcome of World War II.

This specialty is perhaps one of the most fascinating fields in medicine today, considering as it does, the third phase of medicine—that of Rehabilitation. Its purpose is to develop and assist in adjusting the physiological, psychological, social, and economic capabilities of each individual to his fullest capacity, in order to return him to his home and his community as a "Whole man," and a self-respecting, useful citizen.

Physical Medicine, as defined by the Council on Physical Medicine of the American Medical Association, embraces physical therapy, occupational therapy and the employment of physical agents for treatment and diagnostic purposes. It also includes the rapidly developing field of reconditioning the convalescent patient. The report of the Baruch Committee on Physical Medicine, April, 1944, stated that physical medicine includes "the employment of physical procedures not only for diagnosis but also for prevention of disease, especially of joints and muscles as well as for occupational, recreational and physical therapy. The study of spa therapy, of climatology and hydrology is also included. The employment of physical agents in the field of industrial medicine, geriatrics, treatment of rheumatic diseases, treatment of diseases of the blood vessels and treatment of diseases of the nervous system is becoming increasingly important. The problems of wartime rehabilitation have vastly increased the need for adequate knowledge of physical medicine on the part of all persons who treat the sick and the disabled."

The specialists in Physical Medicine (Physiatrists) are in great demand today, and there are shortages of these physicians in Veterans Administration, Army and Navy Hospitals, as well as in civilian hospitals today.

Many civilian hospitals had physical therapy and occupational therapy departments prior to the war. The impetus and value of this work, as it was demonstrated during the war, will undoubtedly stimulate more civilian hospitals to open such departments.

In addition, the Baruch Committee recommendations and plans for civilian Community Rehabilitation Centers is providing further impetus to the program. Already a few such centers are being planned as living, service-giving war memorials, as recommended by the committee. The interest in these centers is becoming more prevalent throughout the country.

In every hospital which has a physical therapy and an occupational therapy department, and in all rehabilitation centers, the Physiatrist is the logical physician to be in charge of this program.

This is true because the prescriptions for Physical Medicine treatments must be made with the same thought and precision as are given the selection and dosage of any drug. Physical therapy is not only the choosing of the proper modality of heat, light, water, and electricity in relation to the physiological results to be obtained by their proper application. Of equal if not of greater importance is: (1) A complete knowledge of numerous diagnostic tests done with special equipment and by manual muscle testing; (2) Muscle reeducation, therapeutic exercises and all other aspects of body mechanics, which are the basis of almost all physical therapy treatments. The diagnosis and the use of the various modalities are aids to complete treatment.

Occupational therapy includes the same basic understanding of kinesiology in its practical application to occupational therapy equipment. In addition, the motivating, psychological, and social factors of occupational therapy are involved in careful prescriptions. When Physical Educators are used in the program, there must be a definite understanding of what exercises they can safely give patients, since they have had no education of a medical nature and in relation to therapeutic exercises. General exercises to restore or maintain general muscle tone can be done by these individuals, providing the exercises do not infringe upon the affected or diseased parts.

Since kinesiology and therapeutic exercises have usually not been included in medical school curricula until recently, there is a great shortage of physicians who have adequate practical knowledge of the subject.

It is obvious that a physiatrist must have such a knowledge to prescribe treatments correctly.

The other divisions of Rehabilitation, Educa-

tion and Pre-Vocational Shop Retraining (Manual Arts Therapy) enlarge upon the basic and definitive treatments by functional and practical applications, supplemented by aptitude and capability tests, and also in some instances as an aid in determining work tolerance. These activities enhance the patient's further adjustment when he has been discharged from the hospital. The physiatrist should have a full understanding and appreciation of these programs and their correlation with State Health and Vocational agencies. It has been found that the entire program functions most efficiently in a hospital when it is in charge of one physician.

There are 40 residences in Physical Medicine at the present time, in 20 different universities. The list of these universities was published in the Educational number of the JAMA page 1342, August 7, 1946.

Post graduate courses in Physical Medicine (of varying duration) are being given in a few schools. Some of these courses were established with a primary concern in research.

Also at the present time there are short courses of one, three or six months duration in recognized universities; these courses are designed to relieve the current acute shortage of doctors in this field.

A specialty Board of Physical Medicine has been approved and is now being established. This Board will create much more interest in the field of Physical Medicine, and undoubtedly attract and influence a greater number of physicians to become physiatrists.

There will be a shortage of Physiatrist for many years. The shortage is great now and will become worse as more civilian hospitals establish this program. Women have as great a place in this field as do men. They have a place in civilian programs, and they can also be of great value in the Veterans Administration hospitals.

Further information may be obtained by writing directly to the Council on Medical Education and Hospitals; additional information may be obtained from reports which have been furnished by the Baruch Committee on Physical Medicine, 597 Madison Avenue, New York 22, New York.

SEMINAR

A seminar on the Progress of Physical Medicine will be given at the New York Polyclinic Medical School and Hospital, Monday, December 1 to Wednesday, December 3, 1947. Specialists in the various branches of Physical Medicine will give the lectures and conduct the question periods. For enrollment blanks and further information address: Richard Kovacs, M.D., Polyclinic Medical School and Hospital, 345 West 50th Street, New York 19, N. Y.

LIST OF FELLOWSHIPS AND RESIDENCES IN PHYSICAL MEDICINE

Approved fellowships or residencies in physical medicine have been established in a number of hospitals including:

United States Army: Walter Reed General Hospital, Washington, D. C.; Percy Jones General Hospital, Battle Creek, Michigan; Fitzsimons General Denver, Colorado.

Veterans Administration: Veterans Administration Hospital, New York; Veterans Administration Hospital, Portland, Oregon.

Civilian Institutions: Los Angeles County Hospital, Los Angeles; Stanford University Hospital, San Francisco; University of California Hospital, San Francisco; Colorado General Hospital, Denver; Michael Reese Hospital, Chicago; Passavant Memorial Hospital, Chicago; University of Kansas Hospital, Kansas City; Massachusetts General Hospital, Boston; University Hospitals, University of Minnesota, Minneapolis; Mayo Foundation, Rochester, Minnesota; Goldwater Memorial Hospital, New York; Hospital for Joint Diseases, New York; Montefiore Hospital for Chronic Diseases, New York; Mount Sinai Hospital, New York; St. Luke's Hospital, New York; Cleveland Clinic Foundation Hospital, Cleveland; Hospital of the University of Pennsylvania, Philadelphia; Medical College of Virginia, Richmond; State of Wisconsin General Hospital, Madison.

A new center for the teaching of technology and biophysics as related to physical medicine has been established at Massachusetts Institute of Technology.

Over fifty fellowships or residencies in physical medicine are now available at twenty-five medical institutions.

For further information regarding the above, write to Dr. Howard A. Carter, Secretary, Council on Physical Medicine, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

SCHOLAR IN MEDICAL SCIENCE PROGRAM ANNOUNCED BY MARKLE FOUNDATION

$250,000 Annually Available for Five-year Post-Fellowship Grants Beginning 1948-49

An opportunity to start a career in academic medicine is offered to young scientists with the necessary training to hold a regular faculty appointment and to conduct original research, through a new program of "post-fellowship" grants, announced by the John and Mary R. Markle Foundation. The purpose of the program, according to John M. Russell, Executive Director of the Foundation, is to attract much-needed talent to academic medicine by giving promising young scientists academic security and financial assistance for a period up to five years. The programs will be conducted in co-operation with accrediated medical schools in the United States and Canada. Grants of $25,000, payable to the co-operating school at the rate of $5,000 annually for a five-year period toward the support of each successful candidate or his research or both, will be available beginning with the academic year 1948-49. If the plan proves successful, the Foundation will appropriate a total of $1,250,000 to the schools by 1953.

A pamphlet covering the details of the plan has been sent to all deans of accredited medical schools, and persons interested in being considered as candidates are referred to them for further information.

PUBLIC RELATIONS DEPARTMENT

MEDICINE AS A CAREER FOR WOMEN

A PROGRAM OF UNUSUAL interest was presented in Chicago January 25, 1947 on WJJD's *Salute to Youth*, a series of programs presenting outstanding guests who analyze their careers and tell young people of opportunities in their respective fields. On this January 25th program, Zonta International (club of executive and professional women) presented a program on medicine as a career for women, with guests, Dr. Carroll Birch, Associate Professor of Medicine at the University of Illinois, and Mrs. Laura Kerr, author of the fictional biography, *Dr. Elizabeth*,* the story of the heroic struggle of the first woman in modern times to enter the medical profession.

Mrs. Kerr: Elizabeth was turned down by medical schools all over the country when she sought admission to their classes. At last, however, after months of discouragement, came the letter telling of her acceptance as a student at Geneva Medical College in New York. . . . But, Geneva Medical College had not really been the brave pioneer it had seemed in admitting a woman to its lecture halls. Rather, it had been the victim of its own students, who as a joke, voted to admit the lady student. She was graduated two years later at the head of her class. Her difficulty in establishing a practice was partially explained, said Dr. Birch, by the fact that there is always opposition to anything new. Men physicians were experiencing the same antagonism and prejudice in the field of midwifery, or obstetrics as we now call it, for they entered this field about the same time women entered medicine. Each field had previously been the exclusive realm of one sex, women holding forth in the field of midwifery and men in the field of medicine. I think it's interesting to note that Queen Victoria, whose first eight children had been brought into the world by midwives, helped to overcome this prejudice by securing the services of a doctor at the birth of her ninth child in order to demonstrate her confidence in the English physician.

Q: Do you think opposition to women doctors has been entirely overcome?

Dr. B: No, not entirely, but women are now admitted to all, except four medical schools in the United States.

Q: One of the things I've heard about women doctors is that they don't remain in medicine. Do you think that is true?

Dr. B: That question can best be answered by telling of a little survey I made at the medical college of the University of Illinois. Between the years of 1920 and 1940, 117 women have received M.D.'s. Of these, 7 have died, leaving 110; of these 107 or 97 per cent are today still engaged in medical work. They are practicing in fifteen different states—in India, and in China—and one was taken prisoner by the Japanese on Bataan. These women are active in all branches of medicine, general practice, obstetrics, and pediatrics leading the list. Three are missionaries, one is in Indian service, and four in the United States Public Health Service. . . . Other more extensive surveys have been made which show the same general trend. While many women physicians marry and have children, most of them remain in the practice of medicine.

Q: Could you tell us some of the outstanding accomplishments of women physicians?

Dr. B: Women have contributed their full share to the science of medicine. . . . There's Madame Marie Curie and her husband, Pierre, who discovered radium. . . . Dr. Alice Evans did the fundamental work on undulant fever. . . . Dr. Maud Slye's work on the heredity of cancer is well known. . . . Dr. Alice Hamilton, now retired from Harvard Medical College, was a pioneer in Industrial Medicine. . . . Then, we must mention the work of Drs. Gladys and George Dick on scarlet fever. . . . Dr. Kate Meade made valuable contributions to the history of medicine. . . . And, there's Dr. Florence Sabin, founder of one of the schools of hematology. . . . Dr. Maud Abbott's pioneer work on congenital heart disease is very important, and Dr. Josephine Baker, who started the first baby clinics in Hell's Kitchen in New York, is responsible for greatly reducing infant mortality. . . . Dr. Madge Macklis and Dr. Priscilla White are well known geneticists. All of these women have added the stature of

**Doctor Elizabeth*, by Laura Kerr, published by Thomas Nelson & Sons.

their personalities to the structure of medicine.

Mrs K.: We mustn't overlook the pioneer work of Dr. Elizabeth Blackwell, either. The free clinic for the poor, which she opened in New York, later grew into the New York Infirmary for Women and Children, a hospital still in existence and staffed entirely by women.

Dr. B.: That's right, and they've made some valuable contribution to medical knowledge. . . . The American Women's Hospitals, under Dr. Esther Lovejoy, are also worthy of mention. They have given aid and over three million dollars for medical relief in war-devastated areas.

But, perhaps, the most important work being done by the women physicians in the U. S. today is in the Cancer Prevention clinics. The first of these was started in New York City by Dr. L'Esperance, the second at Woman's Medical College in Philadelphia under Dr. Catharine Macfarlane. There is also one in Chicago at Womens and Children's Hospital, under the direction of Dr. Augusta Webster . . . These clinics were begun with large groups of perfectly well women. Complete physical examination and laboratory studies are done every six months. The object is to detect cancer in its earliest stage—when it can be treated successfully. Some very interesting and important data have come out of these clinics.

Q: Is there really a need for more doctors at the present time?

Dr. B.: Yes, there is a great need. The country needs many more doctors than it now has.

Q: AND do you think there is a real opportunity for women?

Dr. B.: I certainly do. Women are particularly suited to medicine because of their natural endowments. Their sympathy and all their other mother instincts especially fit them for this field. Young women entering the medical profession today have even greater opportunities than in the past. However, in spite of all these favorable factors, I feel constrained to point out that the woman in medicine must have a greater desire, more strength of purpose and more determination than a man, in order to achieve the same degree of success.

(Copies of these vocational counselling radio scripts are available to local Zonta Clubs; if members of the American Medical Women's Association are interested in having a similar series of programs staged locally, they can contact the local Zonta Club. Transcriptions of the later programs (dentistry, home economics, interior decorating, medicine, nursing, aviation, restaurants, and law) are also available through the local Zonta Club. Editor).

RESEARCH FELLOWSHIPS AVAILABLE

The Surgeon General, U. S. Public Health Service, has been given authority to establish and maintain research fellowships which are intended to promote training and development of investigators in the field of medicine and related sciences. The following types of research fellowships are to be awarded:

1. A predoctorate fellowship is available to qualified applicants who have a Bachelor's Degree. The stipend for successful applicants without dependents is $1,200 and for those with dependents $1,600 per annum. The tuition fee is paid by the Public Health Service: These fellowships are also granted to medical students who have finished one or two years of their medical course and contemplate a career of research and who wish to spend two or three additional years in a basic science before completing their studies toward their M.D. degree.

2. A predoctorate fellowship is available to qualified applicants holding a Master's Degree or its equivalent and carries a stipend, in addition to tuition, of $1,600 or $2,000 for persons without or with dependents, respectively.

3. A postdoctorate fellowship is available to qualified persons holding a Doctor's Degree in medicine or related fields. It carries a stipend of $3,600 for those with and $3,000 for those without dependents; it does not provide tuition fees. An increase of $300 each year is granted to those who are reappointed.

4. Special research fellowships are awarded to applicants who are qualified for a postdoctorate fellowship and who in addition have demonstrated outstanding ability or have special training for a specific problem. The stipend is determined in each individual case.

These fellowships permit vacations in accordance with the rules of the institution where the work is being done but not to exceed one month during the term of the fellowship. Progress reports are required at the end of eight months for fellows who contemplate reappointment and at the end of the fellowship from all others. Fellows are permitted to carry on not more than one hour of teaching or lecture or three hours of laboratory instruction per week during one semester only. Although fellowships are awarded about every three months, the date of beginning work can be set at any time to suit the convenience of the applicant or institution.

Forms for application for a research fellowship may be obtained from the Division of Research Grants and Fellowships, National Institute of Health, Bethesda 14, Md. The application must be supported by transcripts of scholastic records and by letters of recommendations from persons named by the applicant in the completed form. A list of all research projects which the U. S. Public Health Service supported from Jan. 1, 1946 to Aug. 31, 1947 shows a total of $10,214,174 made available to investigators. The largest number of projects (114) were in the field of cancer, the second largest (52) in physiology and the third (49) in biochemistry and nutrition. The Public Health Service also released the names of all the investigators, their projects, the institutions and the amount of money granted in each case.—J.A.M.A. Oct. 4, 1947.

BY ALICE BARTLETT
AND CARROLL BIRCH

A Medical

1 On November 1, 1848, a medical school for women was opened in Boston by Dr. Samuel Gregory.
The Massachusetts Medical Society was incorporated on November 1, 1781.

2 "A Brief Rule to Guide the Common People of New England How to Order Themselves and Theirs in the Small Pocks or Measles" by Thomas Thatcher was printed in Boston on November 2, 1677. It was the first medical treatise printed in the English Colonies.

3 The United States Army Commission confirmed the theory of the relation of mosquitoes to the spread of Yellow Fever on November 3, 1900.

4 The anaesthetic properties of chloroform were discovered by Sir James Y. Simpson on November 4, 1847.

5 The Franklin Medical College of St. Charles, Illinois, was organized on November 5, 1842.

6 On November 6, 1880, Alphonse Laveran discovered the parasite causing malaria. He named it *Oscillaria malariae* but afterwards it became known as Plasmodium malariae.
Dr. Hugh Holmes McGuire was born in Virginia on November 6, 1801. He was the first in America to operate for club foot.

7 On November 7, 1846, at the Massachusetts General Hospital, Dr. George Haywood amputated a thigh, the first major operation under ether.
The New Orleans School of Medicine was opened November 7, 1856.

8 On November 8, 1893, Conrad Wilhem Roentgen, Professor of Physics at Wurzburg, discovered X-ray.

9 Bernard Courtois discovered iodine on Novembeer 9, 1813.

10 The Montreal Medical Institution was opened on November 10, 1824.
The first meeting of the Johns Hopkins Medical History Club was held on November 10, 1890.

11 On November 11, 1773, Dr. John Haygarth read a paper entitled "A Case of the Angina Pectoris with an attempt to investigate the cause of the disease by dissection and a hint suggested concerning the method of cure" at the College of Physicians in London.

12 On November 12, 1846, a patent was issued to Dr. Morton, the discoverer of ether.

13 The Royal Danish Scientific Society was founded on November 13, 1742.
Nicolai Ivanovich Pirogov was born on November 13, 1810. He was a military surgeon and founder of modern Russian surgery.

14 On November 14, 1876, Sir James Paget communicated to the Royal Medica-Chirurgical Society his paper "On a form of chronic inflamation of the bones, osteitis deformans," since known as Paget's Disease.
Dr. Louise Taylor Jones, 12th President of the American Medical Women's Association (1928-1929) was born November 14, 1870.
The Institut Pasteur was inaugurated on November 14, 1888.

15 On November 15, 1769, a committee was instructed to prepare a bill "to make Provision for the Support and Maintenance of Ideots, Lunatics and other persons of unsound Minds". This was the Hospital for the Insane at Williamsburg.
Dr. Sara Josephine Baker, born November 15, 1875, was the 19th President of the American Medical Women's Association (1935-1936).

Calendar FOR NOVEMBER

16 Dr. James McHenry was born on November 16, 1753. He was Secretary of War under President Washington. Ft. McHenry is named in his honor. It was near here that Francis Scott Key, while prisoner on a British man o' war, wrote "The Star Spangled Banner".
Birthday Greetings to Dr. Esther Pohl Lovejoy, 16th President of the American Medical Women's Association (1932-1933).

17 On November 17, 1789, the trustees of the College of Philadelphia published the requirements for the degree in medicine. These included apprenticeship with a "respectable practitioner", attendance at the lectures of the College, examinations, and a thesis. The announcement was signed by Benjamin Franklin as president of the trustees and provost of the college.
Hans Zinsser was born in New York on November 17, 1878. His most noteworthy contributions dealt with the Rickettsia diseases, especially typhus fever.

18 The first dated book of William Caxton in England was printed November 18, 1477. The first medical book published by the same printer in 1485 is entitled, "A litil boke for the pestilence".

19 Leopold Auenbrugger was born in Gratz, Austria, November 19, 1722. He is famous for his studies on immediate percussion of the chest and the location and description of sounds in the diseased chest.

20 The Providence Medical History Club was organized on November 20, 1933.

21 The terms "Anaesthesia" and "Anaesthetics" were introduced by Oliver Wendell Holmes in a letter to Dr. T. G. Morton on November 21, 1846.
On November 21, 1667, Samuel Pepys, in his diary, mentions a transfusion of sheep blood into a debauched man whose character improved following this procedure.

22 Harvard Medical School was established November 22, 1782, by the corporation of Harvard College.

23 On November 23, 1667, Richard Lower performed a transfusion of blood into human veins.

24 Hideyo Noguchi, a distinguished bacteriologist, was born in Japan on November 24, 1876.

25 Practical surgery of the brain dates from November 25, 1884, when a case of tumor was operated upon by Dr. Hughes Bennett and Mr. Godlee.

26 The report of the autopsy on George II, King of England, is of great interest. It is one of the first written records on a case of dissecting aneurysm of the aorta to be found in medical literature. It is dated November 26, 1761.
Sir Charles Bell's outstanding differentiation of motor and sensory nerves was described in a letter to one of his brothers, written November 26, 1807.

27 On November 27, 1801, the old Hospital Saint Louis was officially dedicated to the treatment of skin diseases, with Jean Louis Albert at its head. Under his direction, the hospital soon became the dermatologic center of the world.

28 The first minutes of the Royal Society of London were dated November 28, 1660, and mark an important step in the development of scientific publication.

29 Marcellus Malpighi of Italy was born March 10, 1628, and died November 29, 1694. He was the first to study tissues with the microscope and is known as the founder of histology and descriptive embryology.
The medical school at Salerno was closed by Napoleon on November 29, 1811.

30 Johann Lucas Schoenlein was born in Germany on November 30, 1793. His major contributions were the description of peliosis rheumatica (Schoenlein's disease) and the discovery of the parasitic cause of favus (Achorion schoenleinii). He proposed the terms typhus abdominalis, typhus exanthematicus, and hemophilia.

Current Publications of Women in Medicine

Koop, C. E.; **Perlingiero, Josephine** G., and Weiss, W.: Cicatrizing enterocolitis in a newborn infant. Am. J. M. Sc. *214:* 27-31, July 1947.

(From the Surgical Service of the Children's Hospital of Philadelphia and the Departments of Surgery, Pediatrics, and Pathology of the Hospital of the University of Pennsylvania.)

A unique case of chronic enterocolitis involving the entire small and large bowel in a newborn is reported. It seems likely the lesion had its origin in prenatal life.

Barton, R. L.; **Marshak, Lydia,** et al: Persistence of penicillin in the cerebrospinal fluid after massive intravenous administration. Am. J. M. Sc. *214:* 50-52, July 1947.

(From the Chicago Intensive Treatment Center, Venereal Disease Control Program, Chicago Board of Health, in co-operation with the U. S. Public Health Service.)

The object of this study was to ascertain the duration of time in which penicillin could be detected in the cerebrospinal fluid following the intravenous administration of 25 million units of penicillin over a 24 hour period. The study included a group of 83 patients exhibiting dark field positive lesions of primary or secondary syphilis.

MacLean, Helen, and **Howell, Katherine M.:** Two coexistent strains of viridans streptococcus isolated from blood cultures by penicillin sensitivity tests. Am. J. M. Sc. *214:* 53-55, July 1947.

(From the Department of Bacteriology, Michael Reese Hospital, Chicago.)

Two co-existent strains of Streptococcus viridans were isolated from a case of subacute bacterial endocarditis only because of widely divergent sensitivities to penicillin. The undiscovered presence of more than one strain of streptococcus can be a factor in causing apparent relapse of patients following penicillin therapy.

Wolferth, C. C. and **Livezey, Mary M.:** Observation on changes in ventricular complexes produced by bundle branch block with special reference to the hypothesis of electrical axis and the concept of dextrocardiogram and levocardiogram. Am. Heart J. *34:* 1-19, July 1947.

(From the Edward B. Robinette Foundation, Medical Clinic, Hospital of the University of Pennsylvania, Philadelphia.)

Report of five cases of transient right bundle branch block, which showed very slight alteration of the main deflections of the QRS complex in limb leads. The T waves also showed only slight alterations during bundle branch block. The development of left bundle branch block produced radical changes in the ventricular complexes of the same leads that were little changed by right bundle block. The findings were not in accord with views widely held regarding the parts played by the two ventricles in the hypothesis of electrical axis.

Boyle, Margaret N.; Wegria, Rene, et al: Effects of intravenous injection of nicotine on the circulation in normal persons and in patients with cardiovascular disease. Am. Heart J. *34:* 65-79, July 1947.

(From the Departments of Medicine and Physiology, College of Physicians and Surgeons, Columbia University, and the Medical Service, Presbyterian Hospital, New York,)

Intravenous injections of 2 mg. of nicotine bitartrate were given to 46 subjects. These included 18 normal persons, 24 patients with coronary heart disease, and 4 with peripheral vascular disease. Observations were made on changes in the heart rate, blood pressure, cardiac output, and electrocardiogram.

Lin, Hazel, A. C.: Is toxemia of pregnancy an allergic reaction? Am. J. Obst. & Gynec. *54:* 97-101, July 1947.

(From the Reed & Carnrick Institute for Medical Research.)

A condition closely simulating toxemia of pregnancy with albuminuria, hypertension, and edema was produced in rats by sensitizing them against placenta before they became pregnant. The findings in this preliminary experiment suggest that toxemia of pregnancy might be an allergic reaction of the patient to the placental protein.

Brown, Madeline R.: Epilepsy in old age. Geriatrics, 2: 230-232, July-Aug. 1947.

(From the Massachusetts General Hospital, Mt. Auburn Hospital and New England Hospital for Women and Children.)

The case histories of two elderly patients suffering from convulsions have been given. One was 61 and the other 71 years of age. Each had a sibling who suffered from epilepsy. The symptoms of idiopathic epilepsy may begin at any age, but the probable cause lies in an inherent dysrhythmia of the cerebral nerve cells.

Boorman, Kathleen E.: Daley, Doreen, and **Dodd, Barbara E.:** The relation between the results of ABO and Rh tests and the clinical condition of 2,000 mothers and infants. J. Obst. & Gynaec. Brit. Empire *54:* 281-299, June 1947.

(From the South London Blood Supply Depot and St. Helier County Hospital, Carshalton.)

A serological and clinical survey of 2,000 mothers and 2,024 infants was made. The mothers were tested serologically during pregnancy as well as at delivery. The possible connection between various clinical conditions and serological incompatibilities is discussed.

Drillen, Cecil Mary: Studies in prematurity, stillbirth, and neonatal death. Part I. Factors affecting birthweight and outcome. J. Obst. & Gynaec. Brit. Empire, *54:* 302-323, June 1947.

(From the Department of Child Life and Health, Edinburgh.)

A statistical analysis was made of nearly 8,000 births in the Simpson Memorial Pavilion, Edinburgh during the years 1943 to 1945 inclusive. Statistics included prematurity rates, outcome, and birth-weight, complications of pregnancy, age of mother, legitimacy, and sex of babies.

Barnes, Josephine: Central rupture of the perineum: a report of a case with review of the literature. J. Obst. & Gynaec. Brit. Empire, *54:* 351-357, June 1947.

(From Obstetric Unit, University College Hospital, London.)

A case of spontaneous delivery through the perineum after extensive tearing of the posterior and lateral vaginal walls. The literature on central rupture of the perineum is reviewed.

Cobley, George, and **Goettsch, Elvira:** Streptomycin in the treatment of miliary tuberculosis. J. Pediat. *31:* 70-74, July 1947.

(From the Department of Pediatrics, University of Southern California School of Medicine, and the Children's Hospital, Los Angeles.)

The clinical features of a case of miliary tuberculosis treated successfully with streptomycin are described. A total dosage of 91 gm. streptomycin was given, one gram daily in divided amounts for 3 months. Marked improvement both clinically and roentgenographically was obtained and no relapse has occurred within 2 months after cessation of treatment.

Bogatko, Frances H., and **Mehlman, Julia:** Cholecystitis and cholelithiasis in a congenital diverticulum of the gall bladder in a three-year old boy. J. Pediat. *31:* 75-77, July 1947.

Case report from the New York Infirmary. Successful operation and uneventful recovery.

Bradley, Elizabeth J.: Periarteritis nodosa in childhood. J. Pediat. *31:* 78-81, July 1947.

(From the Department of Pediatrics of the Stanford University School of Medicine.)

Report of a classical case of periarteritis nodosa with unusually extensive lesions in a ten-year-old boy. Complete autopsy report.

Babcock, Charlotte C.: Report of a study of cases with headache as the presenting symptom. J. Am. M. Women's A. 2: 329-335, July 1947.

(From the University of Chicago Clinic.)

A brief report of 40 cases of migraine syndrome treated primarily with psychotherapy, but also with supportive therapy. The author agrees with others that

for the best results in treatment, psychotherapy is as important as drug therapy and that in many instances it not only helps the patient to manage the symptoms but permits further growth and development in his emotional life and social adjustment.

Finkler, Rita S.: Turner's syndrome. Report on three cases. J. Am. M. Women's A. *2:* 336-338, July 1947.

In the three cases presented, estrogenic therapy caused the establishment of cyclic uterine bleeding. Marked beneficial effect on the psychologic status and social adjustment was noted following estrogenic therapy and there was a development of secondary sex characteristics.

Robinson, Margaret: Iodine and failing lactation. Brit. M. J. *2:* 126-128, July 26, 1947.

(From St. Thomas' Hospital and University College Hospital, London.)

Twenty cases of failure to establish lactation in the puerperium were treated with Lugol's solution. The mean output per day increased by 300 per cent. One-third of a small number of failures of lactation in mothers with older infants responded to Lugol's solution. solution.

Levinson, A., and **Earlywine, Josephine:** Pneumococcic meningitis in children. Arch. Pediat. *64:* 285-293, June 1947.

(From the Neuropsychiatry Service of the Children's Division of the Cook County Hospital, Chicago.)

The authors studied 40 cases of pneumococcic meningitis treated at the Cook County Hospital, 1942-1946, inclusive. This series showed the effectiveness of penicillin, but the authors believe it advisable to use both penicillin and sulfonamides.

Torda, Clara, and Wolff, H. G.: Effect of amino acids on the function of the muscles of patients with myasthenia gravis. Arch. Int. Med. *80:* 68-73, July 1947.

(From the New York Hospital and the Department of Medicine (Neurology) and Psychiatry, Cornell University Medical College.)

The effect of infusion of amino acids on patients with myasthenia gravis was studied. The known decline of the amplitude of muscle action potention following prolonged indirect stimulation was prevented by infusion of amino acids.

MacMahon, H. E; Murphy, A. S., and **Bates, Margaret I.:** Endothelial-cell sarcoma of liver following thorotrast injections. Am. J. Path. *23:* 585-611, July 1947.

A case of a patient who was given thorotrast for visualization of the liver. The patient made a clinical recovery and lived for 12 years. Autopsy findings confirmed the diagnosis of syphilis and in addition revealed a primary hemorrhagic endothelial-cell sarcoma of the liver. This seems to support the debatable contention that thorotrast, in sufficient quantities, as a radioactive substance, is injurious and in time may act as a carcinogenic agent.

Walker, Charlotte F.: Hysteria in childhood. Am. J. Orthopsychiat. *17:* 468-476, July 1947.

(From Duke University Hospital and School of Medicine, Durham, N. C.)

Two cases of childhood hysteria and their treatment. Follow-up studies, 12 years and 4 years after discharge from hospital, respectively, revealed that both patients had made adequate adjustments. Hysteria as a reaction pattern is discussed and therapeutic measures are reviewed. The need for a more constructive approach to the problem is stressed.

Young, Florence M., Ph.D.: Psychological effects of war on young children. Am. J. Orthopsychiat. *17:* 500-509, July 1947.

(From the Department of Psychology, University of Georgia, Athens, Ga.)

From September 1942 to July 1945 the author held personal interviews with the mothers of 120 children aged 36 to 84 months, concerning the effects of war on the children. Of this number, 37 per cent showed no ill effects. The subjects who were most generally affected showed approximately four undesirable types of reaction per child, and in all serious cases multiple effects were noted rather than a single symptom.

Sweet, A. M., and **Kemsley, Margaret:** Micrognathia: report of two cases. Lancet, *2:* 10-12, July 5, 1947.

(From Radcliffe Infirmary, Rycote Park Extension.)

The authors believe that micrognathia is best treated by postural methods of feeding, using modified teats when cleft palate makes this necessary. If the tongue causes respiratory obstruction, the child should be kept prone or a light splint should be used to hold the mandible forward.

Robinson, Margaret: Hormonal treatment of deficient lactation: results with crude anterior-pituitary extract. Lancet, *2:* 90-92, July 19, 1947.

(From St. Thomas' Hospital, London.)

The influence of various hormone preparations on failing lactation was investigated. The present report deals with the results of treatment during the puerperium with crude anterior-pituitary extract administered either alone or with other substances.

Kelsall, A. R.; **Stewart, Alice,** and Witts, L. J.: Subacute and chronic hepatitis. Lancet, *2:* 195-198, Aug. 9, 1947.

(From the Nuffield Department of Medicine, Radcliffe Infirmary, Oxford.)

Some 50 cases of subacute and chronic hepatitis have been studied during the past six years, and the records of 35 of these have recently been analyzed in detail. The results of this study are recorded.

Scatchard, G. N., and **Duszynski, Diana Olga:** Routine chest roentgenograms of hospital admissions. Dis. of Chest, *13:* 312-320, July-Aug. 1947.

(From the Department of Roentgenology, Edward J. Meyer Memorial Hospital and the Department of Surgery, University of Buffalo School of Medicine.)

If all general hospitals adopt the principle of making x-ray studies of the chest on every admission, a large number of tuberculous patients will be found. It will be a great step forward in the battle against tuberculosis when this precaution is taken. The cost of such a program will soon be cancelled by the economic benefit to the community in general.

Pierce, Cynthia, Ph.D.; Dubos, R. J., and Middlebrook, G.: Infection of mice with tubercle bacilli grown in tween-albumin liquid medium. J. Exper. Med. *86:* 159-173, Aug. 1947.

(From the Laboratories of the Rockefeller Institute for Medical Research.)

Cultures of pathogenic mycobacteria growing rapidly and diffusely in liquid media containing serum albumin and a water-dispersible ester of olein acid are extremely virulent for chick embryos, mice, etc. The present paper deals with some of the factors which effect the course and outcome of the experimental disease produced in mice by the injection of mammalian tubercle bacilli cultivated in this manner.

Middlebrook, G.; Dubos, R. J., and **Pierce, Cynthia:** Virulence and morphological characteristics of mammalian tubercle bacilli. J. Exper. Med. *86:* 175-184, Aug. 1947.

(From the Laboratories of the Rockefeller Institute for Medical Research.)

This paper attempts to correlate certain differential morphological characteristics of cultures with their virulence, measured either by the classical techniques in the guinea pig or by the recently described mouse infection tests.

Lewis, Lena A., Ph.D., and Page, I. H.: Changes in the plasma protein pattern (Tiselius electrophoretic technic) of patients with hypertension and dogs with experimental renal hypertension. J. Exper. Med. *86:* 185-192, Aug. 1947.

(From the Research Division of the Cleveland Clinic Foundation.)

The plasma of patients with essential or malignant hypertension was studied and that of dogs before, during, and after the development of hypertension following wrapping of the kidneys in silk. The results are summarized in tables.

Kirklin, B. R., and **Gilbertson, Eva L.:** Roentgenograms of thorax that suggest carcinoma of the stomach. J.A.M.A. *134:* 1228-1230, Aug. 9, 1939.

(From the Section on Roentgenology, Mayo Clinic.)

The roentgenologic diagnosis of carcinoma of the cardiac end of the stomach is described. The importance of observing the air-filled upper segment is stressed because many diagnoses can be made or suspected without, or before, the use of radiopaque mediums.

Grayson, C. E., and **Bradley, Elizabeth J.:** Disseminated chickenpox (pneumonia and nephritis). J.A.M.A. *134:* 1237-1329, Aug. 9, 1947.

(From the Departments of Radiology and Communicable Diseases, San Francisco Hospital.)

A case of disseminated chickenpox with recovery is reported. Pneumonia and nephritis were present without any demonstrable pathogenic bacteria in the upper part of the respiratory tract or in the circulating blood.

BOOK REVIEWS

(EDITOR'S NOTE:—*These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of this* JOURNAL.)

REHABILITATION THROUGH BETTER NUTRITION. University of Cincinnati Studies in Nutrition at the Hillman Hospital, Birmingham, Alabama: By Tom D. Spies, M.D., from the Department of Internal Medicine, University of Cincinnati College of Medicine. 94 p., 50 Fig. Philadelphia and London: W. B. Saunders Company, 1947. Price $4.00

In this monograph Spies attempts to sum up the effect of prolonged proper nutrition on patients with dietary deficiencies. The emphasis is placed throughout on proper dietary intake from natural foods being carried to its ultimate conclusion, that of evolving an economically independent person out of a sick patient. The degrees and types of nutritive failure are discussed in some detail, with typical illustrative cases, complete with a discussion of the basic cause of each case described.

The second section of the book is devoted to an outline of therapeutic principles involved, and results in which a generally applicable treatment is stressed. Many illustrations and case histories are given, including specific diets and vitamin therapy. Teaching of proper food habits to the patient in his early stages of recovery is emphasized. In addition, strong evidence is presented that a body may be somewhat undernourished for years or may experience a period of depletion for which it may be able to compensate, but that eventually the protective mechanism fails and there results a complete breakdown with clinical evidence of marked nutritive failure which responds only to intensive treatment over a long period.

Altogether this is an attractively presented and extremely readable summary of some of the present day knowledge of nutrition in therapy. It should be of interest to the specialist and the general practitioner alike.

—Helen J. Neave, M.D.

METHODS OF DIAGNOSIS. By Logan Clendening, M.D., F.A.C.P., Late Professor of Clinical Medicine and History of Medicine, University of Kansas School of Medicine; and Edward H. Hashinger, M.D., F.A.C.P., Professor of Clinical Medicine, University of Kansas School of Medicine. 868 pages, with 143 illustrations. The C. V. Mosby Company, St. Louis, 1947.

This book gives the techniques of physical diagnosis and their interpretations. It discusses the possibilities in a given case as seen from the point of view of a physician at the bedside of the patient. It is the viewpoint of a physician who, in long years of practice, has accumulated a wealth of observations. The authors interpret this knowledge with the mind of philosophers in order to lead their readers over the paths of clear thinking, pointing out the errors and failures of acquired knowledge without the necessary criticism.

They stress the fact that the background of a good general education and the study of the ancient philosophers, like Aristotle and Plato, are of importance for the modern physician, because they will strengthen his logical thinking and prevent slipshod diagnosing and too many exploratory laparotomies.

Whoever will read the first chapter of this textbook, on "Logic and Diagnosis"—be it student or general practitioner—will not put the book aside without having gained some of the understanding which only the really good teachers in medicine are able to convey.

—Anne F. Casper, M.D.

Rh: ITS RELATION TO CONGENITAL HEMOLYTIC DISEASE AND TO INTRA-GROUP TRANSFUSION REACTIONS. By Edith L. Potter, M.D., University of Chicago. 345 pp. with 65 illustrations. Price: $5.50. Year Book Publishers, Chicago, 1947.

In the scant years that have followed the identification of the Rh factor in the blood, the quantity of literature poured forth on the subject has confused the average physician who seeks to ascertain the significance of any new discovery. Some conception of the spade work necessary to produce this manual may be obtained by a glance at the bibliography, which lists 794 titles. The book clearly sets forth the historical, scientific, and clinical data, so that what is known on the Rh factor in the blood up to the moment may be readily grasped. The purely scientific section is clear and understandable. The section on hemolytic disease constitutes an authoritative monograph on the subject. The importance of the Rh factor in transfusion reactions is made very plain and the section on laboratory techniques describes and evaluates them completely. The Rh factor may be of vital importance to any woman in the child-bearing age, to any infant before and after birth, and to anyone needing a transfusion. In short, this book gives a simple, complete, and concise digest of the known facts regarding the Rh factor.

—Mary A. Jennings, M.D.

THE GIRLS THEY LEFT BEHIND. An Investigation into the various aspects of the German Troops Sexual Relationships with Danish Subjects. By Grethe Hartmann, M.D. Einar Munksgaard, Publisher, Copenhagen, 1947. Price, Dan. Cr. 12.

The investigation reported was started in 1943 on the initiative of Dr. J. Genner, the late police surgeon in venereal diseases at the Copenhagen police headquarters. Comparison was made between the figures quoted in 1936 by Kemp, in his book "Prostitution", (in Copenhagen) and the girls reported as sources of venereal disease in the German troops during the occupation. Kemp reported that only 30 per cent were of normal intelligence; the others were retarded or psychopaths. In the war survey, 42 per cent were average and 30 per cent bright. The majority had attended elementary schools, and some had gone on to secondary schools; although none had passed university admission examinations, only 10 per cent had been left back. The origin of 74 per cent was Danish, while 14 per cent had Germanic roots. The normal proportion of 90 per cent born in wedlock was noted. A large percentage, however, had spent their child-

hood in an irregular and unfortunate manner; many more came from middle class homes than in Kemp's series. Poverty was less often a cause for unfortunate childhood conditions than parental irregularities. Political influence seemed to play but little part. In only 25 per cent had the parents any religious conviction. The occupations included were: domestic work (30%), hotel and restaurant work (20%), factory work (20%), business (20%). In Kemp's material 81 per cent worked as domestics.

The incidence of venereal disease in 1939 was only 15 per cent in the girls arrested by the police, whereas from 1940 on almost every second girl examined was diseased. The sources were about 100,000 foreign soldiers stationed in Denmark, and many Danish workers sent to Germany (in 1942-43 there were 40,000), who brought back untreated diseases. Danish workers sent around in Denmark aided the spread.

Of the children born to the girls examined after 1941, 34 per cent were of German origin. In general, the occupation resulted in the birth of about 5000 children with German fathers (i.e., about 15 per cent of the total number of children born out of wedlock for the same period). In 1417 cases Germans acknowledged paternity and contributed towards the maintenance of the children. The German authorities paid for many children and the estates of dead Germans were often taxed. The children were not taken to Germany as rumored. It appears that the majority were taken care of by maternal grandparents. The saddest cases were those whose fathers were Danish traitors. These children were ostracized and were often in danger from their companions and neighbors.

Many case summaries, including social and family histories as well as post-war follow-up reports, illustrate the conclusions drawn by Dr. Hartmann.

—Margaret S. Tenbrinck, M.D.

MENTAL MISCHIEF AND EMOTIONAL CONFLICTS. By William S. Sadler, M.D. C. V. Mosby Company, St. Louis, 1947. Price: $6.00.

This is an excellent book, valuable for layman and professional alike. The subtitle describes it as discussing "Psychiatry and Psychology in Plain English." Actually there is nothing "plain" about this book: in style as well as in content it is of the highest literary caliber. There are certain especially well-chosen phrases, which catch the reader's attention and grow in significance as he recalls them long after.

The organization of the work is especially appropriate for readers who are not practicing psychiatrists or psychologists. Dr. Sadler starts by discussing the numerous mental quirks found in most normal people, and gradually progresses to a consideration of neuroses in which one or more of these minor aberrations assume abnormal proportions. At this point he introduces suggestions for avoiding these neuroses, as a form of reassurance to the more susceptible reader. At the risk of disappointing those morbid people who enjoy wallowing in the gory details of mental illness, he limits his description of the mental psychoses to three brief chapters at the end of the book. He closes on an optimistic note, with two chapters on Psychotherapy and A Philosophy of Life.

From a theoretical standpoint Dr. Sadler makes some excellent contributions to psychiatric thought. He renounces the term "subconscious mind", and substitutes the concept of a "marginal" as opposed to a "central" consciousness. He thus stresses the fact that there is only a single mind, with no sharp demarcation between the various phases of its activity. Thoughts and ideas may be in either the marginal or the central consciousness, depending on whether the individual is asleep or awake, troubled or calm, preoccupied with worries, or concentrating on a particular problem, etc.

Extremely important from the viewpoint of prevention or cure of neuroses is Dr. Sadler's emphasis on the role of fear in causing these conditions. He stresses the biological value of fear in mobilizing the organism to combat real danger, and indicates the danger that excessive fear will disturb the normal physiological equilibrium and lead to abnormal conditions of mind and body. His common sense recommendations for overcoming fear are pearls of prophylactic wisdom, and should be especially helpful as a guide for the physician or surgeon who is trying to relieve the emotional tension of a nervous patient.

It is regrettable that this otherwise excellent book should contain inconsistencies on the subject of child psychology. Dr. Sadler alternately recommends love and deprivation from early childhood. His arguments for a child's need of parental love are well-founded and convincing. However, he unaccountably warns parents not to make the child's life "too easy," as by rocking or feeding an infant when it cries. In the experience of this reviewer the neurotic child is not the result of this type of considerate attention from its parents. Most neurotic children have experienced parental rejection, in the form of rigid adherence to a schedule without regard for the child's individual needs or in excessive expression of avowed parental love that had no basis in fact.

Perhaps the greatest weakness of the book lies in the implication that neurotics can cure themselves by reading this or any other objective discussion of their symptoms. Here, again, Dr. Sadler contradicts his own description of neurotics as people who are unable, or unwilling, to relinquish their symptoms, or who have a tendency to develop new symptoms to displace the old ones. It seems unwise to give such sick people false hopes by encouraging attempts at self-medication.

On the other hand, the therapeutic techniques recommended by Dr. Sadler are of great value if applied judiciously by physicians, ministers, teachers, etc., as well as by psychiatrically trained professionals. As a whole, Dr. Sadler's book is a valuable contribution to psychiatric literature. It is the more valuable because it is not only informative but stimulating and fascinating reading.

—Olga Frankel, M.D.

COLOR ATLAS OF HEMATOLOGY. By Roy R. Kracke, M.D., Dean and Professor of Clinical Medicine, Medical College of Alabama, Birmingham. J. P. Lippincott Company, Philadelphia, 1947. Price: $5.00.

The author is well known as a leading authority on diseases of the blood. In this book he has filled a long felt want for concise and easily followed directions for hematologic technique. The color reproductions are excellent and the accompanying charts and legends are clear and helpful.

The chapters on "Definitions of Hematologic Terms" and "Summary of Hematologic Findings" should be as useful and interesting to clinicians as to laboratory workers. The very short chapter on the Rh factor is disappointing in view of the importance of the subject.

The book should be a valuable addition to any medical or laboratory library.

—Adelaide G. Stem, R.N.

History of Medicine

Highlights in Careers of Women Physicians in Pioneer Minnesota

NELLIE N. BARSNESS, M.D.

MINNESOTA, RICH IN NATURAL RESOURSES, became a territory in 1849, and a State in 1858. It claims the distinction of having offered, through its governor, the first regiment for the defense of the Union. The early pioneers showed their mettle by locating in sparsely populated places, clearing timber land, turning over the virgin soil into fields, laying roads, building their log houses from hand-hewn timber, and always alerted for hostile Indians.

Dr. Christopher Carli, European born and a graduate from Heidelberg, winding his way up the Mississippi River, arrived on May 24, 1841, at what is now called Stillwater. He was the first civilian practitioner to settle permanently in the State. Twelve years later twenty hardy pioneer doctors of the territory founded the State Medical Society. In 1853 the Sisters of St. Joseph built the first hospital in the territory, on the present site of St. Joseph's Hospital in St. Paul. While it was under construction, the cholera epidemic forced the Sisters to open an emergency hospital in Father Galtier's Chapel in St. Paul.

Among the great names associated with pioneer medicine in Minnesota are those of Perry H. Millard, of Stillwater, Charles N. Hewitt, of Red Wing, and Martha G. Ripley, of Minneapolis.

Dr. Martha G. Ripley was born on November 30, 1843, in Lowell, Massachusetts. Soon afterward the family moved to Northeast Iowa Indian Reservation, settling at Fort Atkinson, Iowa, where they experienced the hardships of the early days of the Frontier. Their home was noted for its hospitality. It was also one of the Stations for the "Underground Railway". During the Civil War, Martha was too young to take direct part but she was active in the Sanitary Commission and in raising large sums of money and supplies for the soldiers. Like many pioneer physicians, Dr. Ripley followed the career of teaching school before studying medicine. After her marriage in 1867, she moved back to New England. There she with Lucy Stone, Mary Livermore, and others worked very hard for Woman's Suffrage. Always within her was the driving urge to become a physician, and in 1883 she graduated with full honors from the Boston Medical School. Then she with her husband and daughters moved to Minneapolis, where she opened her office as a physician. For six years she served as president of the Minnesota Suffrage Association. She accepted a professorship of children's diseases in the Homeopathic Medical School, later a part of the Minnesota Medical College, and was called on to lecture on pediatrics and on obstetrics in medical colleges in Wisconsin, Michigan, and Iowa. Her practice grew to be one of the largest in Minneapolis. Always her door was open to those in distress. Her heart reached out to the destitute in the poorer section of Minneapolis, to expectant mothers lacking care during pregnancy and childbirth, and to young girls facing the tragedy of unmarried motherhood. She worked tirelessly; women with a sense of responsibility became interested, and the group studied the condition. A board was formed and the Maternity Hospital was founded in 1886, the second hospital (Northwestern was founded in 1882) founded in Minneapolis by women for women and children and staffed by women doctors. From among the many laws interesting the women, Dr. Ripley singled out "the age of consent." Her unfaltering work had it changed from ten to eighteen years. She carried on her practice up to the time of her death in 1912.

Dedication services of the Dr. Marath G. Ripley Memorial Tablet in the Minnesota State Capitol Building, St. Paul, were held on June 29, 1937. The bronze memorial plaque is appropriately inscribed as follows:

1843 Dr Martha G. Ripley 1912
Pioneer Woman Physician
Founder of Maternity Hospital
in Minneapolis
With farsighted vision and sympathy
She served Humanity
Fearless in Spirit Courageous in Action
Champion of Righteousness and Justice
Her Life a Noble Influence
An Enduring Inspiration
"She stretcheth out her hands to the poor
Yea, she reacheth out her hands to the needy."

In 1953 Minnesota will celebrate the centennial at the annual State medical convention. This Fall, on November 7, we women physicians will have reason to celebrate the centenial of our trail-blazer, Elizabeth Blackwell, who on that date, November 7, 1847, was admitted to Geneva Medical College. It took courage and determination to plan her

medical education and a life full of it to practice her chosen profession.

At that time young women were educated in "Female Seminaries". Some began to think for themselves and agreed with Dr. Willard Parker of New York, who said: "A doctor is born, not made, and is found, naturally, in both sexes". Because of independence of thought, three groups came into action: women physicians, women temperance unions, and equal suffrage for women.

In 1883, the State of Minnesoto instituted the licensing of physicians to practice medicine within its borders. Up to May 23, 1947, a total of 518 women had been licensed, of whom 129 are known to be deceased. Seven were licensed on October 11, 1883.

Mary F. Emery, Boston University, 1882.
Jennie Fuller, Boston University, 1882.
Elizabeth J. Groves (Mrs.), no record of school.
Genevieve Tucker, Hahnemann Medical College; University of Michigan, 1880.
Annes Waas, Women's Medical College, Chicago, 1882.
Lizzie R. Waas, Women's Medical College of Chicago, 1882.
Mary Jane Snoddy Whetstone (Mrs.), Michigan University Medical College, 1880.

Dr. Whetstone married Dr. Allen S. Whettone in 1882; she was the second woman to practice medicine in Minneapolis, the first woman to be elected a vice-president of the State Medical Association, and the first woman to be appointed on the staffs of Asbury and City Hospitals. She was a leader in civic welfare and active in church and temperance work.

The roads in pioneer days were not on the level; they had their seasonal ups and downs—snow drifts in winter and mud holes in summer. Because of the slow transportation and no telephones, the doctor had many all night vigils with a very ill patient or while awaiting the arrival of a new citizen.

In 1882, the women leaders in Minneapolis, then a thriving city, founded the Northwestern Hospital for Women and Children. Forty-three women met and organized the Association. Three days later board officers were elected and a constitution and by-laws were adopted. A house was bought for $3,000, and just seventeen days after the first meeting of the founders, the first patient was admitted. The hospital was staffed by women doctors, Dr. Mary Whetstone and Dr. Mary Hood heading the first staff. Women controlled all voting power. The present hospital has a 300 bed capacity and averages 43,762 meals monthly. It remains a hospital for women and children, run by women; conducts a large nursing school, and is a sincere tribute to its founders.

News of Medical Women

Mrs. Alice Stewart, F. R. C. P. has been appointed Assistant Director of the Institute of Social Medicine, Oxford, England. A member of the pneumoconeosis research unit of the Medical Research Council and Secretary of the Industrial pulmonary diseases committee of the Council, Dr. Stewart was formerly first assistant in the Nuffield department of Clinical Medicine at Oxford.

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Dr. Joyce Tate, Consultant to the Kingston Chest Clinic, Jamaica (West Indies) was a delegate to the Florida Tuberculosis and Health Association held at Miami, May 1 and 2, 1947.

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An International Conference of Physicians was held at the Royal College of Physicians of London —September 8 to September 12. Among the speakers was Dr. Helen Taussig (Baltimore) who discussed the Surgery of Congenital Heart Disease.

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The syndicate appointed last January to consider the status of women in the University of Cambridge has now reported. It recommends that women should be admitted to the university and to all degrees on the same terms as men, and that women should be eligible for all emoluments and all offices (except those of proctor and esquire bedell), and for membership of all bodies concerned with the government of the university. Members of the syndicate differ as to the maximum total number of women students in status pupillari which would be desirable, but they are agreed in considering that in normal times it should not exceed a fifth of the total number of men students.

Dr. Alice Hamilton has received a Lasker Award, one of five individual and two group recipients of the annual Lasker awards for medical achievement. The award of $1,000 and a gold statuette of the Winged Victory of Samothrace was presented to Dr. Hamilton—the first women faculty member of Harvard University—and a pioneer in investigating industrial poisons.

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Dr. Elizabeth Brakeley, who has been with U.N.R.R.A. for several years, serving chiefly in Italy, has returned to resume her practice in Montclair, N. J.

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The Third American Congress of Obstetrics and Gynecology was held in St. Louis, September 8-12. About 1,500 physicians, nurses, hospital administrators, and interested people were registered.

Women physicians attending the Congress were invited to a breakfast sponsored by the A.M.W.A. on Wednesday morning, September 10, at the Jefferson Hotel. About 40 women were present. Dr. Mabel Gardner, national president of A.M.W.A. presided, and called upon the women who participated in the program. Brief informal remarks were made by Drs. Louise Clancy, Portland, Oregon; Eva Dodge, Little Rock, Arkansas; Edith Potter, and Luella Nadelhoffer, Chicago. Drs. Augusta Webster, Chicago, and Priscilla White, Boston, also contributed to the program.

OBITUARIES

Dr. Mary Keyt Isham in Cincinnati, Ohio, on September 28, 1947, at the age of 76. From 1900 until 1903 Dr. Isham gave a course in psychology at the University of Cincinnati Medical College, said to have been the first course of its kind given at a medical institution. Her career included general practice of medicine, 1904 to 1908; service as secretary of the Cincinnati Academy of Medicine, 1906-08; and staff work at the Columbus (Ohio) State Hospital, 1908-1915. She practiced neurology and psychoanalysis in New York, 1915-1922, serving also as instructor in psychiatry at the New York Post Graduate Medical School, and neurologist at the Cornell Clinic. Dr. Isham was a frequent contributor to medical journals and other publications on a variety of subjects mostly in the field of psychology.

MEDICAL SCHOOL NEWS

Tufts College. Five women graduated from Tufts on June 15, 1947: Barbara Gurd, a fourth year transfer from McGill; Loraine Holman, Farmington, Maine; Dorothea Sousa, Medford, Massachusetts; Augusta Foster, Ellsworth, Maine. Dr. and Mrs. McCormick of New Bedford, Massachusetts have recently announced the engagement of their daughter, Helen McCormick, M.D., to Walter M. Platt, Jr., M.D., who also graduated from Tufts College Medical School on June 15.

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Wayne University Medical School. Four women students graduated in the 1947 class, Dorothy Leith, Marjorie Soohoo, Noreen Lemak and Mary Jane Sarcuy. Dr. Leith and Dr. Sarcuy are interning at the Grace Hospital, Dr. Soohoo at the Receiving Hospital, and Dr. Lemak at the Harper Hospital, Detroit, Michigan.

Creighton University, Nebraska. The undergraduate women entertained the senior women students at a dinner party.

The women students have organized in preparation for admittance to Alpha Epsilon Iota, a national professional sorority. The following officers were elected: Miss Alice Hickey, President; Mrs. Margaret Jeffrey, Vice-President; Miss Mary Nosser, Secretary; and Miss Marie O'Brien, Treasurer. Miss Pauline Cranny was unanimously chosen to be the sorority sponsor.

Dr. Geraldine Sotrong and **Dr. Louise Comel,** who have recently finished their interneships, were campus callers recently. Both girls plan residences soon.

Dr. Victoria Carkules, '46 has started a residency in surgery in Seattle, Washington. Dr. Frances Londreth, '46 has accepted a residency in Pediatrics in Childrens Hospital, San Francisco, California.

Miss Patricia Plealen has been accepted for an interneship at Merry Hospital, Dubuque, Iowa. Miss Alpha Bailey starts her interneship in Childrens Hospital, San Francisco, California, July 1.

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State University of Iowa Medical School. The fall session opened September 22, 1947 with a total registration of 278—27 of whom were women.

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Long Island College of Medicine. The fall session opened this fall with 49 women registered in the four classes.

Marjorie Allen, 1946 class, received the honor of being best qualified student in all branches of medicine by vote of the faculty. She interned at Meadowbrook Hospital, Hempstead, Long Island, and is at the New York Hospital this year.

Mary Bruno, '45 has been accepted at the Wilmer Eye Institute, Johns Hopkins Hospital for a three year post graduate service.

Charlotte Bonswer, M.D. '45, is resident in pediatrics at the New York Infirmary for Women and Children, New York City.

Mildred Kamner, M.D. '45, has been awardod a fellowship in internal medicine by the Long Island College of Medicine. She did work on the thyroid gland under Dr. Goetch.

Hazel Wilhelm, M.D. '45, has been awarded a fellowship in pediatrics at Lenix Hill Hospital during which time she expects to work on congenital heart disease, tuberculosis in children, and to participate in organization of a clinic for tuberculosis in children.

Caroline Greene, '50, was married to Arthur-Bouman, also of the class of '50.

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George Washington University School of Medicine.

The fall session opened with thirty-three women registered in the four classes.

A woman stands first in scholarship in each of the three upper clases: Eliza Soyster, senior; June Cohen, junior; and Eulaine Naiden, sophomore.

Eliza Soyster, Kathleen Shanahan, and Beryl Kesler are three of the fifteen members from the senior class elected to the A. F. A. King Obstetrical Honor Society.

Marion Choisser Mills, her husband Stephen R. Mills, and her brother Robert Choisser are all members of the same class, and received their degrees in 1947. Dr. Roger M. Choisser, professor and head of the Department of Pathology, is the father of Marion Mills and Robert Choisser.

Two of the students are ex-Waves, Beryl Shiffler and Eulaine Naiden.

* * *

Temple University. The fall session opened with fifty-two women registered in the four classes.

Several months ago Dean Parkinson decided to arrange for a dormitory for women medical students. Two adjoining row houses, next door to the medical school, have been rebuilt, and attractively and comfortably furnished. Twenty-one girls can be accommodated. Sixteen are living in the houses, and the girls who live elsewhere will be temporarily housed in the dormitory whenever they are on twenty-four hour call.

When plans are completed there will be a large recreation room, available to all the women medical students, and a dining room in which as many as desire may be served.

NEWS FROM THE PHARMACEUTICAL HOUSES

Schering Expands Veterans' Program

The new policy of the U. S. Veterans' Administration, designed to help its medical and pharmaceutical personnel keep abreast of progress in therapy and research, has met with the enthusiastic cooperation of the pharmaceutical industry. Schering Corporation, manufacturers of endocrine, x-ray diagnostic and chemotherapeutic products, of Bloomfield, New Jersey, have contributed a series of technical exhibits on new products developed and brought to the forefront in therapeutics during the War years.

The first of these displays was presented recently at the Halloran Veterans' Hospital, Staten Island, N. Y. Featuring three of the A.M.A. Council on Pharmacy accepted products of the Schering line, the exhibit stressed the importance of the new and effective oral diagnostic aid for gall bladder visualization, Priodax, Schering's brand of iodoalphionic acid. Developed while many tens of thousands of physicians were in military service, safe and sure Priodax tablets are employed widely in place of the dye injection method of visualization.

Another development shown is Estinyl, Schering's ethinyl estradiol, a modification of the true follicular hormone, alpha-estradiol. The most potent oral estrogen known today, Estinyl presents nature's own female hormone in its most effective form. Also shown to veterans' medical staffs is Neo-Iopax, radiographic medium for urinary visualization.

These exhibits will be shown at other Veterans' Administration Hospitals in New York and throughout the entire country, as a part of the broad Schering program of disseminating to physicians the latest information about progress in medical research.

* * *

Schering Announces Unlimited High Potency Oreton-M Tablets Available

With the announcement that unlimited supplies of Oreton, testosterone propionate, and Oreton-M, methyltestosterone, are now available Schering has also introduced a new 25 mg. high potency tablet of Oreton-M.

Used with great success in the treatment of the male climacteric, premenstrual tension, angina pectoris and other commonly encountered clinical entities, the new higher potency tablet of Oreton-M offers greater convenience and economy to the patient.

* * *

New Hope In Breast Cancer

Exceptionally favorable results in treatment of advanced carcinoma of the female breast with large doses of Oreton, testosterone propionate, have been reported by clinical research workers at New York's Memorial Hospital Cancer Clinic. Dr. Frank E. Adair, in a paper published in Surgery, Gynecology and Obstetrics 84:719 (1947) found that more than half of even the inoperable hopeless cases of breast cancer showed improvement in general health.

Relief from pain and regression of the metastases to the bone, with formation of new bone resulted.

Dr. Adair states "We have now arrived at the point where it has become profitable to pursue the use of hormone therapy in certain types of human cancer. . . . Schering Corporation generously made it possible for us to commence our new attack employing large doses."

* * *

Upjohn Opens Chicago Branch

On January 1, 1948, The Upjohn Company, Kalamazoo, Michigan, manufacturers of pharmaceuticals since 1886, will open a new branch office and warehouse at 1001 East 87th Street, Chicago, Illinois.

John W. Schma, former sales manager of the Kalamazoo branch, will be sales manager of the Chicago branch, and **Fred O. Chapman,** former office manager of the Cleveland branch, has been appointed office manager at Chicago.

The building which will house Upjohn's new branch was purchased just after its completion in the early spring of this year. It is modern and functional in appearance and construction, and is located near the residential section of Chicago's south side, just a few steps from the Illinois Central Railroad's suburban service.

The Chicago branch will employ about fifty people at the start in the office and shipping departments, and will enable the Company to give the best possible service to customers in the Chicago and Illinois areas.

* * *

The School-Child's Breakfast

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule, If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum. Pablum furnishes protective factors especially needed by the school-child—especially calcium, iron and the vitamin B complex. The ease with which Pablum can be prepared enlists the mother's cooperation in serving a nutritious breakfast. This palatable cereal requires no further cooking and can be prepared simply by adding milk or water of any desired temperature.—Mead Johnson & Company, Evansville, Indiana, U.S.A.

* * *

1947 Edition of Parergon

Parergon (work by the side of work) is Mead Johnson & Company's picture book of artistic works by physicians.

The current edition is a book of 208 pages and shows 1100 examples of creative art by contemporary physicians.

This book is available without charge only to physicians upon request of Mead Johnson & Company, Evansville 21, Ind., U.S.A.

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(3) **Libraries.** (There is an increasing demand from high school and liberal arts college libraries for information on opportunities for women in medicine. A gift subscription to your local high school or college library would be a service to both your profession and to the recipient).

(4) **Foreign Women Physicians.** (Many medical women in this group are desperately in need of current medical literature but are financially unable to subscribe to even one medical journal).

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Ortho-Creme is available in tubes of 2½ oz. with and without applicator. Its active ingredients are: Ricinoleic acid 0.75%, boric acid 2%, sodium lauryl sulphate 0.28%.

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SHOULD VITAMIN D BE GIVEN ONLY TO INFANTS?

VITAMIN D has been so successful in preventing rickets during infancy that there has been little emphasis on continuing its use after the second year.

But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

MEAD'S Oleum Percomorphum With Other Fish-Liver Oils and Viosterol is a potent source of vitamins A and D, which is well taken by older children because it can be given in small dosage or capsule form. This ease of administration favors continued year-round use, including periods of illness.

MEAD'S Oleum Percomorphum furnishes 60,000 vitamin A units and 8,500 vitamin D units per gram. Supplied in 10- and 50-cc. bottles. 83-mg. capsules now packed in bottles of 50 and 250. Ethically marketed.

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